# THE BUILDER

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- Bedroom on Second Floor.
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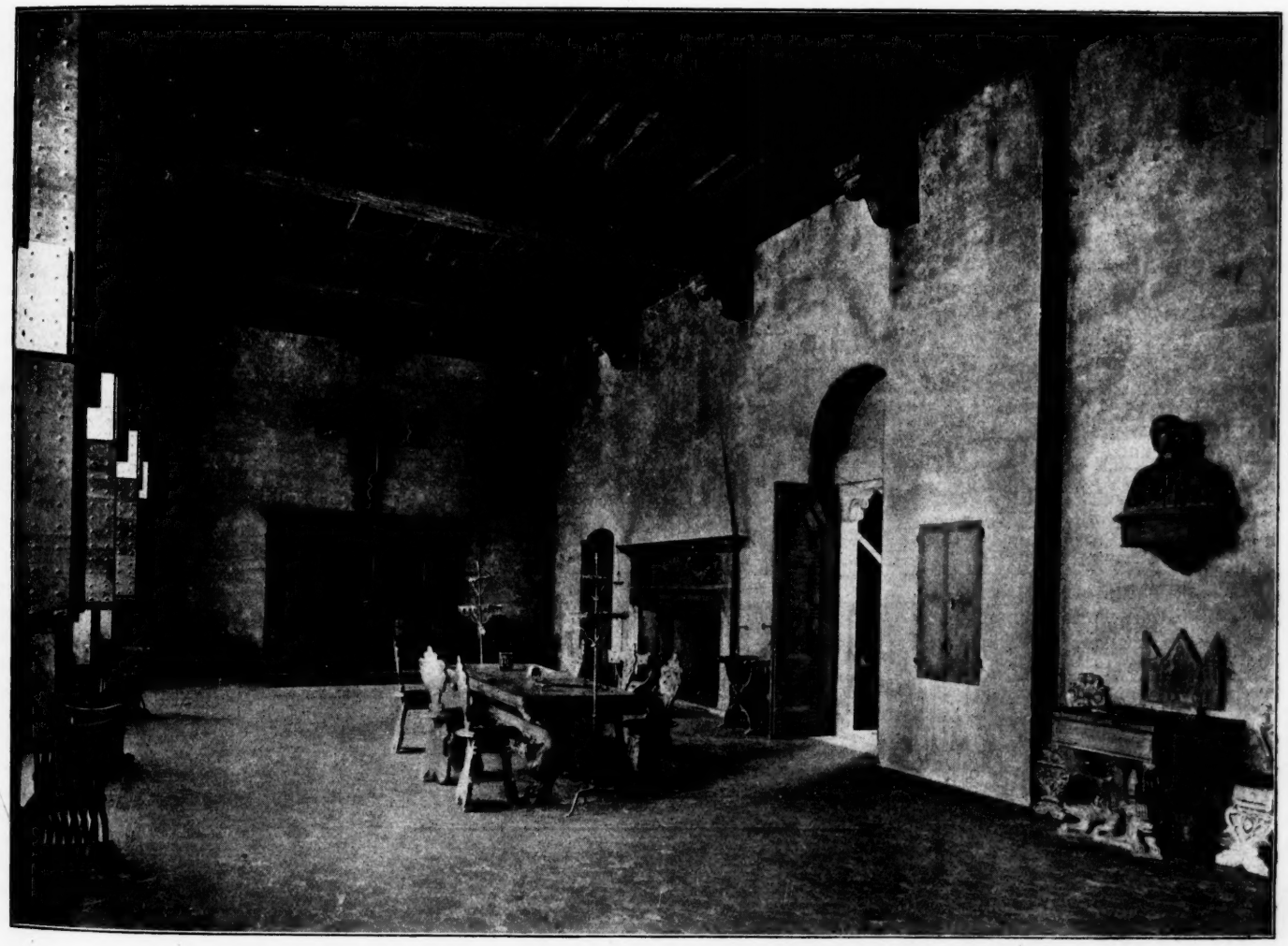
- The Peacock Room.



**The Palazzo Davanzati, Florence: Principal Salon, First Floor.** (*See page* 290.)

## "WHY EMPLOY ARCHITECTS?"

THIS question has often been asked by persons who have no adequate notion of the complicated nature of an architect's work. They perhaps think of an architect as a very high-flown gentleman who charges heavy fees for preparing beautifully-coloured drawings and nothing more. Some of them may have derived their ideas of the profession from the memoirs of the Rev. Sydney Smith, who paid an architect five-and-twenty guineas for a set of plans which were absolutely useless, and then set to work, aided solely by his mother-wit, to build his own house, which, he afterwards admitted, was the ugliest in the county. We can all sympathise with the reverend gentleman, if indeed his case has not been exaggerated, and we can believe that there were Pecksniffs in his day, although there is no room for them now.

Persons who imagine that money is to be saved by dispensing with the services of an architect usually place themselves in the hands of some firm who undertake to combine the functions of architect and builder. It has been argued that, since these functions used to be combined in the Middle Ages, the same state of things ought to be possible to-day. The reply would, of course, be that, in the complex conditions under which modern work is carried out, a specialisation of functions has become a necessity of our times. It is not surprising that an ignorant client or customer should fail to grasp this point, though a little reflection might convince him that the work of

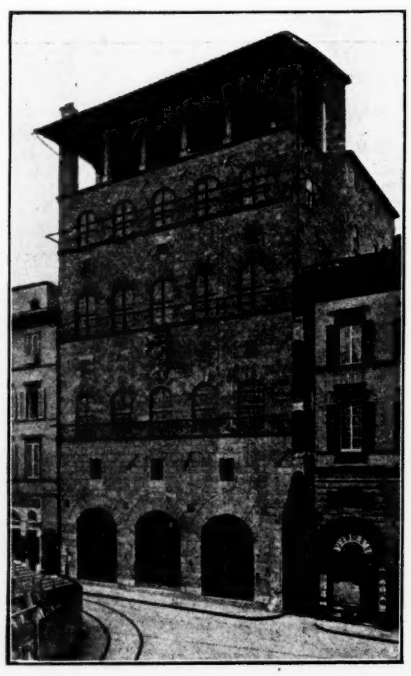
preparing plans must be paid for in some way. We have previously referred in these columns to the system of offering plans and estimates "free of charge." Such offers are calculated to attract the class of mind that expects to obtain something from nothing. But it is strange that persons bent on economy should not perceive that the expense of furnishing plans and estimates free to those who do not authorise the execution of works must be shared amongst those who do.

Some years ago a firm of building contractors established an architectural department as an adjunct to their business, and continued for some time to undertake work that is usually done by architects. In the result, a large amount of business came into their hands which would otherwise probably have flowed into other channels; but they found that they had lost certain other business which would have been obtained through the recommendation of architects, and, balancing loss against gain, they concluded that the new arrangement was not in the long run remunerative, and they ended by abolishing their architectural department.

The above instance emphasises one aspect of the question. Architects, being human, are naturally unwilling to employ building firms who make a practice of usurping professional functions. This, however, does not prevent a building owner who regards architects as "expensive luxuries" from employing such firms. He may learn by experience the disadvantages of the system which he is helping to support. It may be asked, In what way is the question likely to impress itself upon his mind?

A leading firm has assured the writer that they always prefer, when possible, to work under an independent architect, as such an arrangement relieves them of much responsibility. Competition compels them to undertake architectural work in order to secure a large amount of custom which would otherwise be lost to them; but such work is never quite satisfactory to them. The fact is that the building owner who dreads the expense of employing an architect has at the back of his mind a lurking suspicion, born of ignorance and therefore often ill-founded, that his builder seeks to persuade him to sanction unnecessary works in order to run up a large bill of "extras." Such suspicions are exceedingly embarrassing to a building firm, and often prevent them from advising their customer to take the course which they know to be the best in his interest. When, however, there is an independent professional adviser standing between the building owner and the builder, no such suspicions against the latter can arise. There are, indeed, persons ready to mistrust everyone, including their architect. They may argue that, whereas it is in a solicitor's interest to create legal difficulties, and in a physician's interest to postpone a patient's recovery, in order to add to professional charges, so is it in an architect's interest to increase the cost of a building in order to enhance his own emolument of 5 per cent. Such a low view of professional men's general conduct may be justified in some cases, because dishonest men are to be found in all ranks of life; but every intelligent architect knows that the policy suggested above would lead to a loss of practice far outweighing in value the immediate gain.

There is another kind of suspicion to which an architect is open, namely, that of favouring his client at the expense of the builder. The difficulties of an architect's position in this connexion were emphasised in the discussion on "The Newer Responsibilities of Architects" at the R.I.B.A. last January. The architect is now the agent of the building owner, and anon he is called upon to arbitrate between him and the builder. It might be argued that, whereas an architect cannot afford to offend his client, he cannot be expected to act impartially between client and builder in any dispute between them. "You are the builder's man," said an architect to a quantity surveyor some years ago. "True," retorted the surveyor, "but I am driven to that position because you are the client's man, instead of being impartial, as you ought to be." No doubt there are grounds for such complaints at times, but from the building owner's point of view this is no reason against employing architects.



The Palazzo Davanzati, Florence.

## A FLORENTINE PALACE.

A SHORT time back we discussed the type of museum best calculated to interest the public, and pointed out, in dealing with past epochs, the desirability of calling up a vivid picture of the manner of life and the customs of the times illustrated.

Such a view has guided Professor Elia Volpi in his dealings with the XIVth-century Florentine palace, now known as the Palazzo Davanzati. When this property came into Professor Volpi's possession in 1904 the rooms had been subdivided and modernised, but he made it his task to restore the whole building as nearly as possible to the condition in which it existed in the XVIth century.

The palace, however, does not date from this period, being already some 300 years old when it passed, in 1578, into the hands of the family whose name it now bears. Small and unpretentious compared with great blocks like the Strozzi and Pitti palaces, it must nevertheless have been, at the time it was built, one of the most important private palaces in the city, and even after its occupation by the Davizzi family for three centuries it must still have been regarded as a well-appointed and commodious residence, judging from the fact that its purchasers, the Davanzati, were one of the most prominent families in Florence at that time, and that they did not find it necessary to make any very drastic alterations to the building.

In accordance with the conditions prevailing in a mediæval walled city the palace is of a considerable height in proportion to its area. The main façade in the Via Porta Rossa has a height nearly double the frontage, and consists of four lofty floors of the XIVth century, crowned by the loggia added by the Davanzati in the XVIth, but as the upper room was lowered in forming this loggia and the high battlemented parapet was then removed the proportions of the façade were not greatly altered.

The building was originally detached on the other three sides, but only by means of narrow alleys, now partially built over. Its depth is slightly more than the width, and the back follows a somewhat irregular line.

Of the five floors above the ground level, the first, second, and third are similar in plan, and seem to have been occupied as distinct residences even from quite early times.

The main façade faces north, and its whole length on each of these floors is taken up by the principal saloon; behind this are placed, on the east side, the kitchen offices, in the centre a small court containing the staircase, and on the west a second large saloon extending to the back of the building; behind the kitchen and courtyard are the bedrooms.

The ground floor seems to have been mainly occupied by the guard and retainers, and occasional onslaughts were evidently anticipated, as in the floor of the saloon over the entrance hall there are a number of apertures through which missiles could be discharged on an attacking party that by craft or force might have succeeded in getting through the massive entrance-door. We can picture that if a hand-to-hand struggle were going on in the hall the defenders might be materially assisted by those in the room above.

Interesting though they are, the arrangements of the building are not the most important features of this palace; these may be found in generally similar lines elsewhere. Neither does the collection of furniture, valuable though it is as an assistance in realising the original effect of the rooms, possess a claim to go beyond what can be found in other collections. No, the great and outstanding interest of the Palazzo Davanzati lies in the remarkable preservation of the characteristic and beautiful mediæval decorations. We know of no other case in which a private palace of this period has retained the wall paintings in so perfect a state, and in which it is possible to see the rooms

almost exactly as they were in the XIVth century. The more important rooms were hung with textiles or tapestries, as is evident from the hooks for this purpose which still remain. We would give much to see these original hangings, but, alas, they have probably long since perished! In the principal bedrooms, however, the walls were painted from floor to ceiling, the upper part being given up to a decorative frieze (see plates), while the lower imitated the hangings which were to be found in the same position in the saloons. Judging by the pattern of these painted coverings, the actual ones in use were probably woven material, geometrical in design, though, of course, it is quite possible that the genuine hangings were either richer in pattern or perhaps of tapestry. If we take contemporary paintings as a guide, the more likely material is one with a repeating pattern, such as we may find in small pieces in the principal museums.

The main interest of the painted work is naturally concentrated in the frieze, this being clear of the furnishings. In the illustrations given it will be seen that the painted diaper patterns on the lower portion of the walls clearly represent hangings, as the top edge is either a representation of rings on a rod or shown as slightly dropping from nails at intervals; above this is an indication of marble slabs with inlaid margins, and the frieze in each case represents a landscape or garden scene visible through openings in an arcade or loggia. While the treatment is varied in each case, the general scheme is the same. Thus in the second-floor room the frieze is more naturalistic and varied in the peacock-room. These and some smaller birds are the only incidents that break the uniformity of a formal arrangement of trees and heraldic shields. In the third-floor room, also, each panel between the painted columns has repeating motive composed of vases and foliage. The work throughout displays considerable fertility of invention, while the rich and harmonious colouring compares favourably with the more accomplished work of the succeeding century.

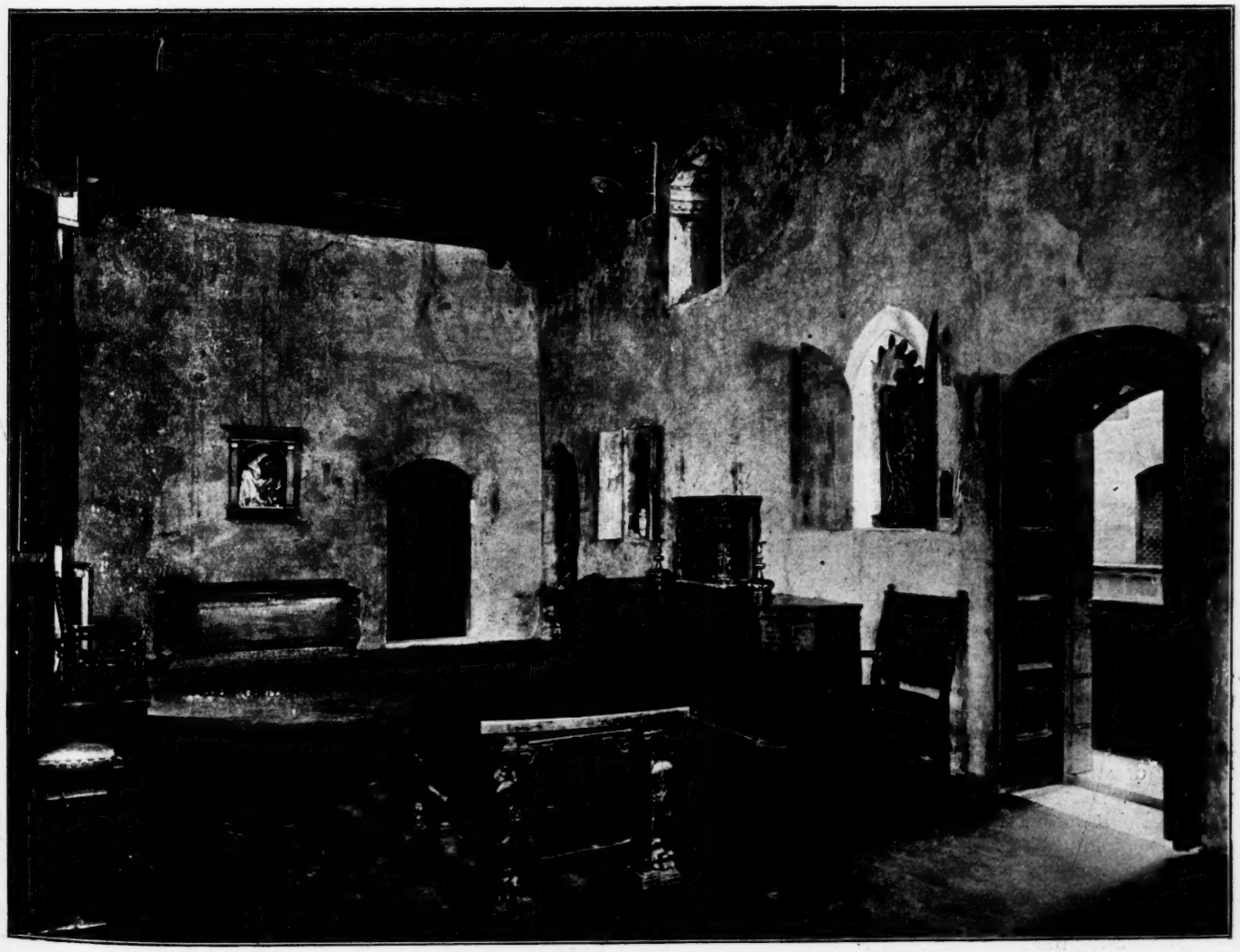
## NOTES.

**The Associates and the R.I.B.A.**

We do not suppose that the concluding sentence of our leading article, which Mr. Horace Bonner did us the honour to quote at a recent meeting of the R.I.B.A., conveys to all our readers the meaning which, to judge from his interpolated explanations, it appears to convey to him. Our remark might be equally true if interpreted in this way, but it does not happen to be what we meant. We referred to the interests of the general public or of the State, and not to those of the members of the Institute. Possibly, however, Mr. Bonner only intended to express the opinion that the two things are always identical, and that in mentioning one we might reasonably be supposed to be referring to the other; whereas it was our profound sense of the occasional difference, even antagonism, between them, and of the possibility in an imperfect world of privileges clashing with public duty that prompted our observation. This is a point that we think should be borne in mind, for a charter not only confers privileges, but also entails responsibilities towards the State which grants it.

**Lambeth Bridge.**

We are glad to see that Parliament has again risen to the occasion and declined to sanction the reconstruction of Lambeth Bridge on lines which would be unworthy of its position. Mr. John Burns in supporting the opposition has done another good day's work for London. When the Committee's proposal for a second and narrower bridge was first put forward we called attention to the fact that it appeared to provide for less traffic than the original scheme, without giving any reasons why a decrease of traffic was to be anticipated. We suppose, however, it is again the same question of misplaced economy not unconnected perhaps with the question of party politics. It certainly does seem a pity that this should be the case, and that improvements which so vitally affect the general amenities of the city should be at the mercy of a party vote. Surely it should be possible to lift them to a higher plane and for the two parties to come to some common agreement as to what London should look like and as to the scale on which public monuments should be conceived and carried out. There may, no doubt, be political differences of opinion as to whether a certain improvement is advisable or not, but any difference of opinion as to the method whereby it is done should be technical rather than political.



**The Palazzo Davanzati, Florence: Principal Salon, Second Floor.**

Anyone who introduces continuity of policy in these matters will do another good day's work for London.

**Preservation of Ancient Monuments.**

THE announcement that the First Commissioner of Works will introduce a Bill dealing with the preservation of ancient and historic monuments will be received with general satisfaction. The need for some step of the kind has long existed; but after the Tattershall Castle muddle it was obvious that matters could not be left where they were, and it became a question only of how long Government action would be delayed. The proposed demolition of the Reindeer Inn at Banbury seems to have brought matters to a head, and we shall look forward with interest to the appearance of the proposed Bill. What France and other countries can do by scheduling ancient buildings in order to guard and preserve them as national treasures should have been done here long ago, and the early date promised for the introduction of the Bill in the House of Commons is an indication that the Government at last realise their responsibilities.

**The Improvement of London.**

THE speech delivered by the King when laying the foundation-stone of the New County Hall for London, with its reference to London as not only the capital of the Empire, but as in many respects the centre of the world, may be taken, we hope, as an indication that the State is alive to the importance of making London more worthy architecturally of its high destiny, and that all efforts in this direction will never lack the sympathy and support of the State. The reference to the growth of efficiency, which is the result of carrying on deliberations in surroundings worthy of their importance, has an application to every sphere of life, and may well be borne in mind by all local authorities throughout the land. Rightly understood, this consideration may indeed be said to be the *raison d'être* of architecture. The value of its influence in all the affairs of life, whether public or private, needs no further justification. The recognition of this by the Chief of the State, with special reference to the public monuments of London, will do much, we are sure, to rouse that sense of civic pride in which London hitherto has been so sadly lacking.

**Combined Heating and Power Plant.**

CENTRAL heating installations for groups of buildings, such as modern hospitals, asylums, and workhouses, are quite familiar to architects of to-day, but a somewhat unusual arrangement is that of the combined central heating, electric light and power station now in operation at McGill University, Montreal, described in the paper read by Mr. R. J. Durley to the Institution of Civil Engineers recently. Up to 1908 the buildings were heated by independent steam or hot-water equipment, and electricity was obtained from the local supply company. With a central boiler-house, and have been able in consequence to use fuel of much cheaper quality than heretofore, and to utilise exhaust steam on an extensive scale for warming purposes. The system fully deserves the consideration of architects engaged in the design of large public institutions.

**The New Indian Capital.**

THE announcement which appeared in the daily Press on Wednesday will be read with interest by architects and especially by readers of this journal. The Secretary of State for India has, at the request of the Government of India, appointed a Committee of experts to advise the Government of India as to the site of the new capital at Delhi and the laying out of the same. The Committee will consist of Captain George Swinton, Chairman of the London County Council; Mr. John A. Brodie, C.E., City Engineer, Liverpool; Mr. E. L. Lutyens, F.R.I.B.A.; and Mr. H. V. Lanchester, F.R.I.B.A. The Committee will assemble at Delhi about the middle of April, where it will find materials ready for consideration, and will have the assistance of the Department of Indian Public Works and of other Departments of the Indian Government. Its work, which will be of a general and preliminary nature, and will involve no questions of detailed planning or architectural design, is expected to occupy four or five months.

AN ordinary general meeting of the Architectural Association was held on Monday at No. 18, Tufton-street, Westminster, S.W., when Mr. Gerald Horsley, President, occupied the chair.

Mr. Hall, Hon. Secretary, made the following announcements:—

The Fifth Spring Visit on March 16, to King's College Hospital, Denmark-hill (architect, Mr. W. A. Pite, F.R.I.B.A.).

The Annual Smoking Concert and Revel of the A.A. Athletic Club, on March 26, at eight o'clock, at the Pillar Hall, Victoria Station Restaurant.

The President announced the Council's nominations for the House List for Session 1912-13, as follows:—

**House List, Session 1912-13.**

*President.*—Mr. Gerald C. Horsley.
*Vice-Presidents.*—Mr. W. Curtis Green, Mr. Maurice E. Webb.
*Hon. Secretary.*—Mr. H. A. Hall.
*Hon. Librarian.*—Mr. W. H. Ward.
*Hon. Editor A.A. 'Journal.'*—Mr. P. Cart de Lafontaine.
*Hon. Treasurer.*—Mr. Arthur Keen.
*Council.*—Messrs. A. T. Bolton, C. C. Brewer, H. P. Burke Downing, F. C. Eden, G. L. Elkington, Stanley Hamp, A. G. Horsnell, Geoffry Lucas, Winton Newman, T. Fyfe, W. G. Newton, A. G. R. Mackenzie, W. J. Tapper, Gilbert A. Scott, Alan J. Slater.

The President announced that a special general meeting had been held, and that the following alteration of By-law 36 had been passed:—"The office of Hon. Secretary shall not be held for more than *two sessions consecutively*."

On the motion of the President, the following votes of thanks were accorded:—

To Mr. G. Norbury for kindly presenting a number of cork models of various English cathedrals to the Association.

To the Secretary of the Hampstead Garden Suburb Trust for kindly conducting a party of members over the two new churches and institute, upon the occasion of the Fourth Spring Visit, to the Garden Suburb, on March 2; also to Mr. E. L. Lutyens for kindly allowing drawings to be exhibited.

To the Society of Dilettanti for kindly presenting plates from Penrose's "Athenian Architecture" to the Association.

## AMERICAN ARCHITECTURE.

Mr. C. A. Daubney then read a paper entitled "American Architecture." He said:—

"We may criticise here and there, condemn this and that, and express approval of isolated works, but in architecture it is still true that there are no discoveries similar to those in the realm of science which flash like beacons in the night or which open up untrodden of progress and leave the old ones discredited and to decay.

New forms of construction and material, it is true, may be at the disposal of the architect. He may experiment with them at his own or at his client's cost, but his art will be little affected thereby.

Rivalry or striving after effect does not account for the subtle variations in contemporaneous architecture in its best periods.

Local differences of climate, material, and resources played some part in affecting change in detail, but in every case the artist had before him general principles and great ideals, which were surely little affected by local affairs.

He built literally in many cases upon the ruins of his predecessor's work, but he had scrupulous regard for the best that had gone before.

I dare not hope to reveal to you to-night any startling ideal in American architecture at the present day. There is much in it that is good and hopeful side by side with much that is bad and hopeless. All I can do is to indicate certain phases which may lead you to investigate and study the subject more fully. I am reminded that architecture is the graveyard of many an accepted platitude. Genius, said Carlyle, is the transcendent capacity of taking trouble first of all. Hogarth similarly said that genius is nothing but labour and diligence; while Matthew Arnold adds his verdict that genius is mainly an affair of energy.

If such be true, we should find a genius at every street corner, more particularly in New York, Chicago, and the other great cities of the States, where the painstaking efforts of the architects cannot be denied. Then, too, the belief that the pathway to Hades is paved with good intentions is flatly contradicted where architecture is concerned.

None will deny that it is an upward path, and not a downward one, which is trodden by those who set out equipped with a good intention and an earnest desire to do good work.

It is the servile copyist, the architect with no intentions, who will find his place on the slippery slope. He has not within him that dynamic force which will overcome the downward drag of the commercial world, the vanity of the flesh and the devil of competition. The subject divides itself naturally into environment, execution, and education.

### Environment.

It is reported that a lady from the States, on seeing the lawn in front of one of our University colleges, approached an attendant and inquired as to how the thing was produced. She had a lawn, on which money had been lavishly expended, but it was a failure compared with this one. "We rolls it," replied the man, "and we waters it. Then we waters it and we rolls it for about 400 years, and it always comes out all right."

In considering American architecture we are bound to recognise its recent birth.

There is no long line of tradition to steady the pencil and to guide the pen.

Substantially no historic masterpieces dating from the heroic times are readily at hand for study and reverence. The architect must largely import his ideas, and must trust in the preparation of his designs to the very unsatisfactory evidence of illustrations and photographs rather than to the works themselves.

A moment's consideration will show that in such circumstances two things must happen. The strong man will demand to have before him clear and explicit records of the best works corresponding to that upon which he is engaged. If he cannot recreate their atmosphere, he will at least grasp the detail. His work shall be correct and technically good, even if in the transportation of the design the spirit has been irretrievably lost. The weak man, on the other hand, will probably try to distract attention from his deficiencies by riding off on his own unregulated fancies into realms of wild experiment which other workers of mature experience have long since learned to shun. In some such way it is possible to account for the extreme care and completeness of much of the work.

Comparisons are always odious, but one is forced to the conclusion that the nakedness of some of the modern work on this side is not entirely due to the poverty of the client or to a desire for severe simplicity at any cost, but rather to a lack of capacity on the part of the designer to tackle a more ornate and possibly more appropriate scheme.

The rapid growth of the country on all hands demands that the architect should possess great capacity for work and organisation, and must be ready to switch off his staff from the elaborate calculations for a skyscraper to the design for a cathedral, an exhibition building or a pavilion in the park. I venture to suggest that there are few—if any—of our architects who could control such a staff as is to be found in some American establishments. One cannot, of course, magnify beyond its proper limit the virtue of expedition in the preparation of working drawings, but there is something to be said in the favour of those who can, for instance, prepare in six weeks the complete drawings, including all the necessary elaborated calculations, plans, and details, for a million-dollar skyscraper. It demands a sure and certain grasp of the business and a complete knowledge of at least one side of the profession.

Another factor having important bearing upon the architectural problem is the rapid development and change on every hand. Within the last generation, for instance, the larger part of New York business centre has been rebuilt, not for the reason that the buildings were decayed or unsuited to the needs of the times, but solely because there was a demand for business accommodation which exceeded the supply.

It was a perfectly sound financial undertaking to tear down the old buildings and erect new ones on the site with increased accommodation obtained by carrying the roof and the upper stories into the clouds.

An architect is not human if he is not vitally affected by such an environment. He will work for the immediate present and not in the knowledge that his building will in all probability be, for good or bad, a lasting landmark for the next dozen generations.

True, in many of the more permanent buildings, such as the colleges, municipal and State institutions, there is a different element. We find there a keen effort to give character to the work, if, however, there is some tendency towards the fantastic and bizarre. Such buildings are usually subject to competition, and in view of the shifting character of personnel of the local authorities it is not to be wondered at that the attractive design may be the successful one, whereas the more appropriate one is ignored.

It might be hoped that in the smaller buildings of permanent character, such as local schools, churches, and the like, some trace of a national feeling would be found. There, however, is the all-important difficulty of distance to be contended with in America. It is almost impossible for the well-known men, who, of course, congregate in the centres of population, to deal successfully with such comparatively trifling works, often at an enormous distance from their offices.

It is to be feared that these buildings are being more and more dealt with by specialist firms of contractors who are prepared to erect attractive buildings, as per catalogue, in any spot at a fixed rate from New York to San Francisco.

Even in purely domestic work this commercial element is most painfully in evidence, possibly more so than in our own cities. The man who suddenly rises will have no difficulty in finding what he wants from the flood of catalogues of country houses which immediately overflows his letter-box.

The architect is caught in the stream. He must carry out instructions, and the astonishing fact remains that an architect with a wide reputation will erect some hideous monstrosity apparently without turning a hair. He might be forgiven if he were ashamed of the job and endeavoured to forget it as quickly as possible. But this does not obtain. He will advertise his misdeeds without compunction side by side with other works of his own of which he may reasonably be proud.

I was, for instance, taken by a well-known architect to a seaside residence built at some considerable cost, but which, in my opinion, was disfigured beyond redemption by having the principal reception-room panelled throughout in polished red mahogany, in a style which might be appropriate to the bar parlour of a saloon, but certainly out of place in a private house.

Another element which militates against much real progress is the growth of specialists. Not only do the ordinary structural specialists flourish on every hand, but they will go beyond their European prototype by contracting to carry out an architect's small-scale design, with detail and ornament of high technical and perhaps artistic merit, without the architect in the multitude of the other concerns of his profession having to trouble himself too much on this head.

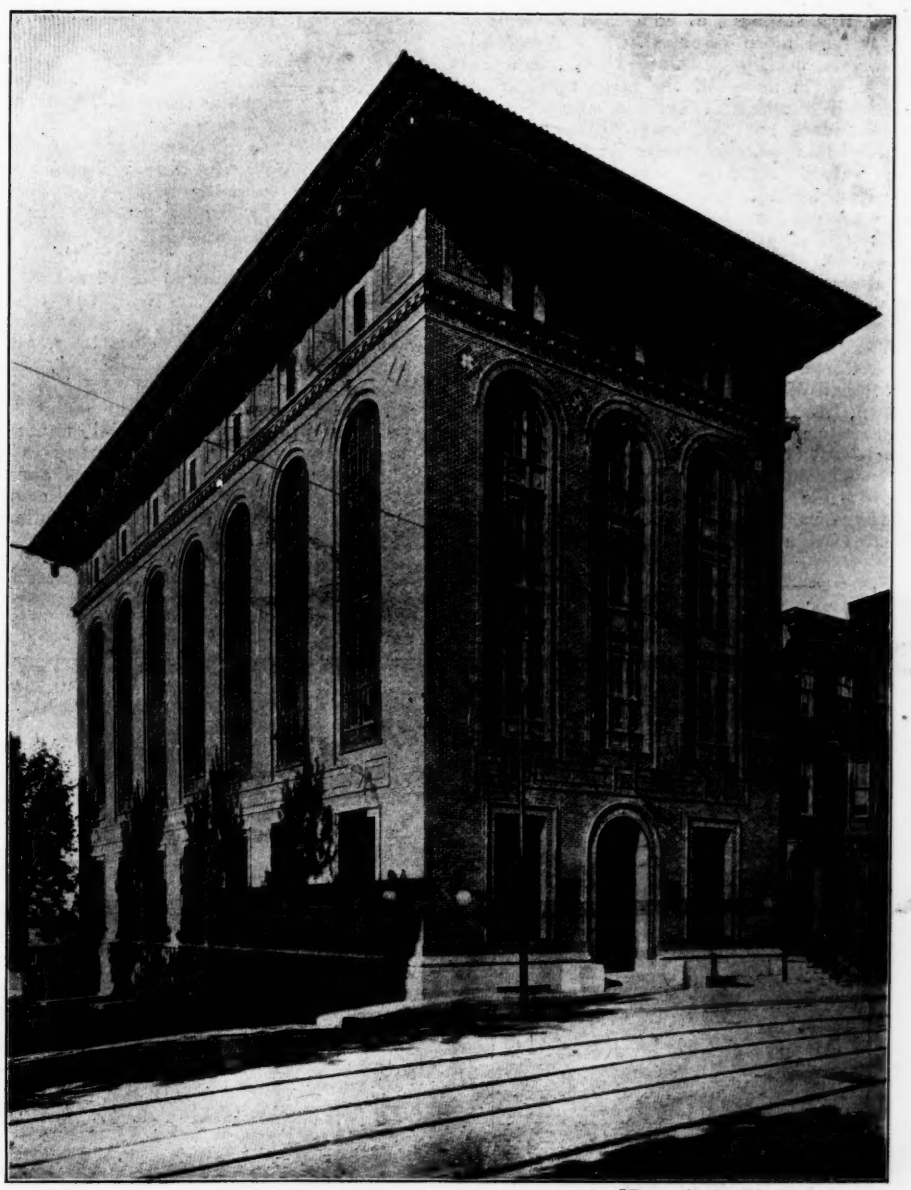
**Execution.**

The American architect appears to have wider responsibilities than the architect here. This is more particularly true in the case of the larger works. There is a very general understanding that each man should rule his own roost. The architect will be expected to produce a satisfactory result without having to be guided except on general lines by the client. It may be that the client is only building as an investment and knows nothing of good or bad work. In such circumstances the architect will probably find himself with an absolutely free hand.

This will demand from him close attention to rule and convention. Any hostile criticism of eccentricity of design will shake the faith of a purely commercial speculator, and so we find a certain amount of restraint upon originality and genius.

Another restraining element is the fact that in most of the large centres there is a very rigid building regulation which demands the production of full plans, details, and calculations for inspection by the local authority in order that a building permit may be considered. The omission of essential information will delay the permit being issued, and the work itself will be consequently retarded. Novelties or variations from customary procedure will, as may be expected, be looked upon with suspicion by the building officials and cause possibly lengthy explanations and inquiry.

When his building permit is obtained there is the risk of objection by the building inspector if variations from the approved



[From the *Brickbuilder*, Boston.

**School of Industrial Arts, Trenton, N.J.**
**Mr. Cass Gilbert, Architect.**

plans are attempted. In this position the architect will also feel compelled to work upon safe lines. He cannot have the luxury of watching his building develop and of making alterations and improvements in the design as the work proceeds.

Of course, the splendid generosity of wealthy patrons frequently affords the architect an opportunity of exhibiting his genius free from all such trammels as have been referred to above. I venture to suggest, however, that these isolated cases do not represent the main stream of architectural life in the country. Remember, too, that native artisans are practically non-existent. The architect may even find it necessary to have his work executed here in England or on the Continent. This cannot conduce to progress.

The crude native sculpture on some Celtic monument is still more highly regarded than the careful carving by the contemporaneous workmen in the streets of Rome of ornament and design copied from the Greeks.

Do not let us forget that we are here discussing American architecture, and I make the distinction between a native effort towards an ideal which shall be characteristic of the land and its marvellous people, and an architecture which may largely consist of careful adaptation of European models, but which shows no real ground for hope of progress in the near future.

**Education.**

Whatever I have said which seems to criticise adversely modern methods must be discounted in considering future prospects. Architecture will be safe from degeneration if continued effort is made on proper lines to train the coming generations. Not only will it tend to develop the art of architecture, but it offers a restraining influence upon the eager but unqualified who press into a profession which to-day opens up splendid prospects for many a pushful youth.

A high standard of education is becoming more and more essential. The tremendous interests, both public and private, which are at stake in many of the large undertakings demand a technical skill in the first place which does not but rarely obtain here. I think that public sympathy is strong on the side of rigorous examination and qualification for all practising architects. This, of course, is a hopeful sign, and the universities are alive to the necessities of the case.

Harvard, for instance, offered a five-years' course. There was an entrance examination which included English, French, German, Physics, Drawing, and Histories of Greece and Rome. The student had the advantages of a hall of casts, painting-room, exhibition-room, modelling-room, library, photograph darkrooms, etc. The first year's course included the Technical and Historical Development of Ancient Styles, Drawing in Line and Colour, Mathematics, Languages, and Physics. In the second year Design, Perspective, Statics, Resistance of Materials, Mediæval Renaissance, and Modern styles were added. In the third year Building Construction, Theory of Design, Masonry and Foundations, and Mineralogy were taken. In the fourth year, in addition to general topics, two special subjects had to be taken from a list which included Design in Painting, Sculpture, and Architecture, Greek Art, Fine Arts of the Middle Ages and of the Renaissance, Classical Archæology, Private Life of the Romans, Life in Ancient Greece, Landscape Design, Æsthetics, Bridges and Buildings, Health and Ventilation. The average gross cost to the student for residence and education was only 100*l.* per annum.

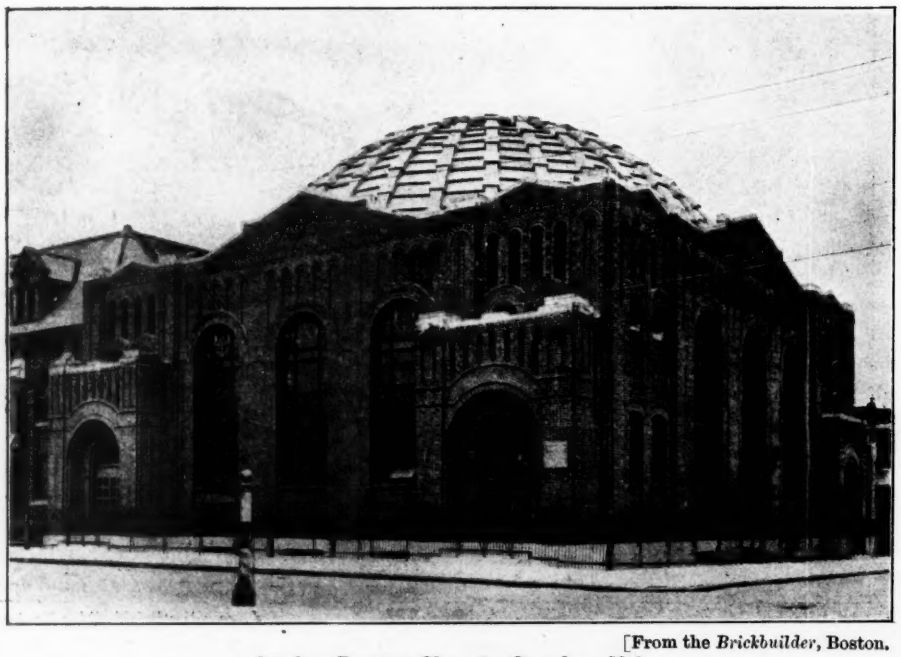
There was a somewhat similar programme given in connexion with Washington University, and at a somewhat similar cost.

The Massachusetts Institute of Technology at Boston gave a very full five years' course with a continuous training in design for three years' Freehand Drawing throughout and one complete year in the Life Class. A feature of these college courses is the Summer Schools. I have a note of one which was in the form of a tour to Europe particularly for the study of the work in the northern towns of Italy, finishing with a bicycle excursion from Genoa to Paris.

The University of Pennsylvania offered three separate courses—viz., a four-year course leading to the degree of Bachelor of Science in Architecture, another course leading to the degree of Master of Science in Architecture, and a shorter two-year course. There was an additional three-years' course in Interior Decoration.

The Syracuse University provides almost equal facilities for the student. These are but illustrations of the facilities for study and preparation for the profession. The total result is generally seen in the fact that the majority of the young men in the offices of practising architects are college men with a college degree. Incidentally, there is a minimum of the mechanical drudgery which in many London offices is handed over to inexperienced youths who may possibly grow up to exploit the special features of the work done by their employers. If one may venture into the realm of prophecy it must be to express the belief that there is a bright prospect for architecture in America.

The question as to whether this will be realised in the near or distant future depends upon one main factor—viz., the education of the public taste for the beautiful. As matters stand at the present time, art may be degraded and good taste may be corrupted by being compelled to follow on the heels of those who act on the principle that just as in some commercial undertaking wealth and power can demand a rigid obedience, so in the realm of art the artist must follow the lead of his employer, provided he can purchase his compliance at a princely price



[From the *Brickbuilder*, Boston.

**Linden Baptist Church, Camden, N.J.**

Messrs. A. Truscott & A. H. Moses, Associated Architects.

The good time would be brought within measurable distance by a period of commercial depression. Architects might then find time to turn their attention to the everyday affairs of the community. A tenement house would not then be recognised as now, as a ghastly imitation of a factory, or the ordinary suburban dwelling as something very much akin to a wooden barn.

Architects might even find time to raise protests against the desecration of the public streets by hideous advertisements and encroachments upon the public convenience by corporations whose only concern is for the dividends of their shareholders.

There would then grow up a corporate sense of what is good, and that a man should not have a free hand to offend the good taste of his fellow-citizens, even though he may be a successful business advertiser.

In conclusion, may I again venture a prophecy that if we are anxious to make real progress we shall do so only on the lines adopted with success in the States? Registration is a futile procedure if it results only in shutting within a ring fence the good and the bad. We must begin where all real progress begins—in the school and in the workshop, in the public Press, in the common affairs of life. When the authorities who are responsible for the bridges across our rivers and the lamp-posts in our streets, when the factory and mine proprietor who can and does blast the landscape and ruins our buildings by the reek of his works, when the workman, as in days gone by, recognises that it is as easy to make a beautiful thing as it is to make an ugly thing, when the community at large expects that the little things of life shall be presented in a true and beautiful form, we shall have no cause then for anxiety for those larger works which have too long been looked upon as the only and proper sphere for the architect and artist alike."

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**Mr. C. C. Brewer followed with some notes of impressions gained during a recent visit to the United States. He also showed some lantern slides of interesting American work. He said :—**

"I would like first to give a preliminary word of warning to any architect contemplating an architectural holiday in America, namely—get the idea of a holiday out of your head. Climate, conditions of travel, the amazing—indeed, almost incredible—hospitality of the nation, and their feverish energy, will combine to make the experience comparable only to some such effort as that of watching from an express train an architectural cinematograph in a gale of wind and endeavouring to make mental notes of the solutions of hitherto unthought-of architectural problems. The result is intoxication, and on regaining consciousness one's impressions are somewhat dimmed.

The chief characteristics of American architecture to-day seem to me to be vigour, competence, singleness of purpose. All these are, of course, the outcome of the national spirit, the amazing commercial activity, and the climatic conditions. A country progressing at the speed of America to-day has crying need of a race of competent and vigorous architects, and forces them to the single purpose of erecting the best possible building in the shortest possible time. It leaves them no leisure for the "Hopes and Fears for Architecture" or "Philosophic Doubts." Do not let me be misunderstood. I am not suggesting that haste is apparent in the best building of America of to-day, for I hold strongly that the architects are rising, with almost incredible success, to meet not only the commercial and practical needs of the community, but to work out artistic problems with a certainty, a dignity, and a breadth the equal of which it would be hard to find in any other period. Indeed, I believe the history of architecture of the last twenty years in America will be read almost as a fairy-story by future generations.

Mr. Daubney has hinted at the conditions of rush and hustle under which these building are produced, and has not—could not—exaggerate it; nor should it ever be forgotten in judging the results.

It is, indeed, a matter for amazement and admiration that even sky-scrapers, for which the working drawings, of a completeness undreamt of in England, are said to have

been made in a period which would barely suffice with us for the preliminary sketches, do not more often skriek aloud to the world the horrid tale of the speed of their conception, labour, and birth.

In judging the work of architecture in any country to-day I hold, of course, that it is only fair to put out of court perhaps 75 per cent. of the buildings. We must judge by the large public buildings, the railway-stations, the office blocks and stores, and by the thoughtful and more serious domestic work for either the rich or poor.

An international comparison of cinematograph palaces, public houses, and the domestic vulgarities of the *nouveau riches*, on the one hand, or the meannesses of the jerry-builder on the other, would be neither to the point nor profitable, for the first are merely a form of pictorial advertising and the jerry buildings are surely temporary structures. In America, however, I believe that there is a smaller percentage of both the blatant and the mean than in most European countries, for the Americans are dealing with big schemes and new ideas even in advertising, and mean buildings grow less mean when set in the ample suburbs of American cities.

As an example of what I mean by big ideas, even in advertising, I would instance the new Pennsylvania Railway-Station in New York.

A new station becoming necessary, the idea that the finest and largest station in the world might be no bad advertisement seems to have occurred to the directors, and their next step was to employ an architect of large and fine ideas; their choice fell luckily upon Mr. McKim.

He seems not only to have entered into their scheme, but surely his enthusiasm must have carried them on till the undertaking grew almost in the spirit of cathedral builders. The result is a temple to the glory, not only of the Pennsylvania Railway Company in particular, but of well-ordered and swift transport.

You have probably all seen photographs of this wonderful building, but no photographs can give an impression of the effect which its vastness, orderliness, and completeness produce on coming to it out of the turmoil of New York.

Imagine an entire railway-station with fittings and furniture, even to the spittoons, designed by the architects; a railway-station so planned and so contrived that there is no noise nor bustle, where no porters intrude with luggage, and where it has even been thought worth while to forego the profits of the bill-sticker that all may be well ordered and dignified. This last was the culminating stroke of genius, for the effect of a station, where even the notices are subdued and where the direction signs are of bronze set upon marble tablets and advertisements are not, upon the mind accustomed to walls, ticket offices, and lamps covered with lettering and pictures of every size and shape is one of almost bewildering calm. It is as if the Directors had said: "We will startle the public, not with glare and noise of our money-making, but with dignity and repose."

And so to-day the conception of a railway-station as a dignified thing seems to have taken hold of the Americans, and we have the big Washington Station and others in the same spirit.

Comparing these with the three latest termini in London—the Great Central and the two at Victoria, which had not even the sense to be one—we weep for London.

This idea of the dignity of commercial enterprise seems growing upon the business men and showing itself in the stores, office buildings, and banks.

Can the Americans be learning the market value of repose in the midst of their strenuous life?

It may be argued that there is no real newness in this great Pennsylvania Station that the hall is a mere translation of the Baths of Caracalla on, I believe, a larger scale; that the detail on this and most other buildings of the same type in America is directly taken from Italy or Greece.

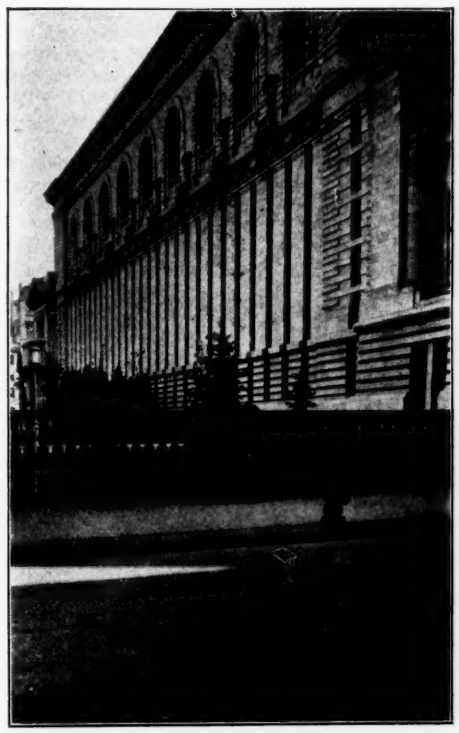
This brings me to the wider criticism of their architects which is so often made by Americans to-day: that they are not evolving a national style.

It is surely difficult for contemporaries to judge whether or not a style is being evolved in any art, and it is probable that the same critics, had they lived in the XVth century in Italy, would have been chiding the architects for being mere copyists of the Romans.

I cannot believe that men who are approaching architectural problems with the freshness, vigour, and clearness of thought of the Americans of to-day will not leave behind them something worthy to be called a national style, even if they are content, for the while, to use and reuse the language of the past.

Speed and hustle are the natural parents of copying in architecture. The man, set face to face with enormous problems to be tackled at great speed, turns naturally to the text-book for his details, and I am not sure that, given speed as one of the conditions, the results do not gain in the process, for the architect has the more time for mass and the big idea.

Certain it is that the trend of architectural training in America is to this end—to train competent architects and competent assistants, not thinkers and writers on architecture. The man who knows where to find



**New York Library: Back Elevation.**

Messrs. Carrère & Hastings, Architects.

From a Photograph by Mr. H. M. Fletcher.

chapter and verse in those wonderful libraries which seem to be a *sine quâ non* in every large office, and how to use the matter when found with a competent good taste and discretion, is the man to help the designer of big schemes. And I must admit that one rarely sees a draughtsman on the architectural side of a big office without a great folio of Renaissance, or classic art at his elbow.

A word as to training. Mr. Daubney has given a rough sketch of the curriculum in vogue some ten years ago, but has said no word as to the influences at work within the schools themselves. That this is entirely French no one will deny. At the time of my visit Harvard was preparing to celebrate the arrival of a French born, speaking, and trained Professor of Design, and Harvard was the last college to hold out against the Beaux-Arts tradition. All the others had already either Frenchmen or Americans trained in the French manner as their guiding spirits. Harvard and Boston architects had long fought for training on more English lines, but the force of the Beaux-Arts movement, as evidenced by the roll of students in their own and other colleges, counselled surrender.

In the face of this it is a matter of surprise to me that American work is not showing even stronger evidences of French fashion. This may be somewhat accounted for by the great influence of McKim, who, although French-trained, yet drew most of his inspiration for his later work from Italy. But I hope the reason is rather the growing strength of a tradition of their own, a strength fostered by the individuality of the American character, and their brilliant qualities of self-reliance and rapid, straightforward thought.

As to the influence of their own colonial style, this seems to me for the moment under a cloud. Much that has been perpetrated by the jerry-builder under cover of the word colonial has swung the pendulum of fashion a little far from New England and Virginia, and, although many men of taste and culture are using the vernacular in their domestic work, one is a little sorry to find that development along these lines does not seem likely.

The lack of mediæval building in America itself and latterly the Beaux-Arts training no doubt account for the poverty as a whole of the ecclesiastic and domestic work. The wave of the Gothic revival can only have been a feeble ripple by the time it reached the States, for it left behind it a trail of thin and wiry buildings of unimaginable meanness.

Richardson, with his strong, if at times somewhat clumsy, hand, left his mark upon the town halls and churches of his day, and was followed by less strong men, why by their eccentricities soon brought his manner into disrepute.

His influence seems to linger to-day only in the West, where the work of that brilliant architect and contriver of clever detail, Mr. Louis Sulivan, still shows signs of early Richardsonian influence.

The success of Cram & Goodhue's Gothic scheme in the competition for the rebuilding of West Point, and the masterly manner in which they are carrying it through in the face of much adverse criticism, is evidence that there is now a finer feeling for Gothic work. The French and classic tide is not quite sweeping all before it, and there still remains a small but faithful band of thoughtful men—"the Englishmen," they sometimes call themselves—who are fighting against it. The little leaven of their work may not be without good effect upon the lump, especially in the one quality in which American work of to-day seems lacking.

On returning to England our work, at all events in our towns, had a very depressing effect on me. It seemed mean and muddled and with an uncertainty and a hesitancy about it as if we had been for many years without a goal. Our public buildings strongly reminded me of the criticism upon them of a candid American architect, who, when pressed to tell how they struck him, said: "Why, I guess they look like scrambled eggs!" But we seemed, especially in the country, to have one quality which American work had not: I mean the right and truthful use of material.

In the States one's sense of decency and honesty is constantly being hurt and one's nerves jarred by shams so cleverly carried out as to deceive the eye if not the hands. I could quote instances without number, but one must suffice.

There is at West Point a charming memorial hall by McKim; the interior has many bronze ornaments—some are cold to the touch, others more difficult to reach are warm. The entrance to the large hall is through a screen of caryatid figures, ostensibly of bronze; but the discovery of a horrid wound of plaster where two toes have been kicked off seems to take away any value the building may have as a memorial.

The use of stucco for stone, of plaster painted, and most cleverly painted, as oak would seem not to be confined to the music-hall and the saloon, or to the work of vulgar men—such things are surely unworthy of so great and rich a nation.

In England, even in our poverty to-day, we have one great heirloom from our Gothic past, a certain love of honesty in materials, which gives even the weakest of us a sense of shame in their wrong use.

If I might borrow a little American confidence to sum up what seems to me the strongest characteristic of their race, I would say, "Knowing what they want and getting it."

When the architects realise that besides vigour and certainty, competence and dignity,

delicacy and brilliancy, they want also honesty, they will get that too, and then American architecture will come to its own."

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**Mr. H. M. Fletcher,**
in proposing a vote of thanks to Mr. Daubney and Mr. Brewer, said he agreed as to Mr. Brewer's remarks as to the singleness of purpose of the American architects. They intended to go in a certain direction, and they devoted all their mind to get there. They knew what they wanted to make their cities fine, town planning being to them a very real thing, and it was amazing to see the schemes they were producing for different cities, though those schemes did not always get carried out owing to vested interests and so on. He did not suppose that in any other country had there been such splendid plans produced within a few years as those for San Francisco, by Burnham (or rather Burnham & Co.), the centre of Chicago, of Cleveland and Washington. New York was not a fine example of town planning and never could be owing to its cramped site on an island, but all over the States there was a great feeling of rivalry between cities, and that showed how they were aiming at great objects. It was the same with the buildings: attention was given to mass and the grouping of big features and the detail rather went to pieces, sometimes, or it was borrowed from other buildings; but there was a big architectural movement, and it was splendidly backed by the men who had grown rich; they were extraordinarily generous in helping to carry out such schemes.

**Mr. Mackenzie**
seconded the vote of thanks, and referred to the great progress in American architecture during the four years since he was there. He thought that was owing a great deal to the public interest in architecture in America. As far as he could tell the people were as interested in architecture and as ready to talk about it as the ordinary people here were ready to talk about sport and theatres, and the American architect got more encouragement than did the English architect.

**Mr. W. H. Ward**
said he was much struck during a visit to the United States by the extent of the architectural progress there in the last few years. He agreed with Mr. Brewer as to the great hopefulness that there is for the future of American architecture, based chiefly on the immense efforts being made to educate the young architect and to give him a thoroughly sound grounding in all matters of design, and to teach them what is being done in Europe. What they were engaged on at present was working through the European styles and getting to know as much as was possible to know about them. One might hope that in the course of half a century or so a really national style would be evolved. It was interesting to observe all the different styles they had been trying and making experiments in. It was his impression that there was not any real or thorough understanding of the spirit of Gothic architecture, for the Gothic churches he saw did not impress him greatly, but he had not seen Mr. Cram's work. Some of the most interesting experiments in European styles were in the early Italian manner. The chapel of the Columbia University was a most charming building, chiefly in brick with a little marble and a considerable use of tiles.

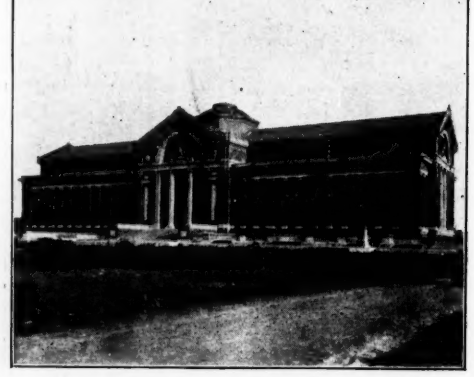
**Mr. J. M. Whitelaw**
said he was struck by the intense zeal and earnestness and definiteness of aim and ideal in the American architects and the go-ahead character of their work. A high note was being struck in genuine art expression.

**Mr. A. T. Bolton**
said that what they had seen that night in the way of illustrations must have been a great revelation to many of them. It was very difficult in one country to form a proper idea of what was being done in another, and in judging the architecture of another country we were apt not to know who was doing the best work, and the fact took a long time to get round. Americans he had met showed a great interest in architecture and talked intellectually on the subject, but that was because they travelled largely, and, like English people who travel, they naturally took more interest in the buildings they saw abroad than those they had at home. They necessarily took an interest in the subject. The Americans were in a comparatively new country, but they had not kicked ancient architecture out of doors and derided the historical method; on the contrary, they seemed to have rather too much appreciation of it.

**The Chairman,**
in putting the vote of thanks, said he was rather surprised that more had not been said about the work of Richardson and Hunt, because he believed he was right in saying that they really founded modern American architecture, and they were both of them Englishmen.

The vote of thanks having been heartily agreed to,

**Mr. Daubney,**
in reply, said they had been hearing about two most important problems, *i.e.*, education and the rush of American work. He thought that the student and the architect in America exhausted himself at his work, but there were not so many limitations or cramping of that work. An architect here was tied up by money, convention, ancient lights, and things of that kind, but over there a man could exhaust himself on a subject, and could study for some specific object, such as a railway, a church, a big museum, but there was an absence of subtle features in building, such as could be found here, where one felt that the architect had been forced to study and grapple with the matter in order to get round some special difficulty. He was wondering if the architecture of America would really be advanced



**War College, Washington.**
Messrs. McKim, Mead, & White, Architects.
(From a Photograph by Mr. Richard Philipp, Milwaukee.)

if there were to come a commercial catastrophe and the architect had to think out his problems more as we do.

**Mr. C. C. Brewer**
also replied, and said he met many American men who thought about their work and seemed a good deal keener than most Englishmen. All English architects who went to America—at all events, all he knew—were impressed by the vigour and fineness of the American ideals. The Americans were trying and were no mere hustlers; they were a race of keen, extraordinary well-trained men, and that training was altogether beyond what we had. It was difficult when an architect had perhaps a hundred assistants to say which was the work of A. and which that of B., but in the case of Messrs. McKim, Mead, & White, his idea was that, as Mr. Mackenzie had said, White was a curio hunter with very good taste, and had educated his clients and the public greatly in that way, but most of the finest buildings by the firm were, as far as one could get to know, by Mr. McKim, and he had a wonderful way of impressing everyone about him, very much as Mr. Norman Shaw did in this country. When Mr. McKim got interested in a work he gave up all else for it, and that note of keenness was characteristic of the American. He was certain that public interest in architecture was much greater in America than here—at least, it was more intelligent; people think about what modern architects are doing, they have a knowledge of architects' names, and they discuss the works of the big men in the way in which the works of painters are discussed here by people of the same class. Gothic work in America was poor, except in the cases of a few men who had thrown themselves into it with great interest. The work of Sulivan, of Chicago, was very thoughtful. As to Richardson, almost every town had some copy of Richardson, who, wonderful man that he was, had a style which did not lend itself to copying, and his features had been copied with unfortunate results. Americans admitted he was a great architect, but his work did not seem to lead anywhere, and it got badly caricatured. There was an absence of muddle in American work, but they did not get the delightful details to be seen in English work.

The President announced that the next meeting will be held on March 25 (combined meeting with the Camera, Sketch, and Debate Club), when a paper by Mr. C. F. A. Voysey, entitled "Patriotism in Architecture," will be read. The nomination of officers for Session 1912-13 will also take place.

## THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W. During the opening of the meeting Sir Edward White occupied the chair, but retired after Captain G. Swinton had been elected Chairman for the ensuing year.

KNIGHTHOOD.—A vote of congratulation, proposed by Sir John Benn and seconded by Mr. Cyril Jackson, was accorded to Sir Maurice Fitzmaurice, the Chief Engineer to the Council, on having been Knighted by the King on the occasion of the foundation stone-laying of the new County Hall on Saturday last.

TOWN PLANNING OF DELHI.—Captain G. Swinton reported to the Council that he should only be able to occupy the chair for about four weeks, as he will be leaving for India at the end of that time, having been appointed one of the Committee for the town planning of Delhi.

LOAN.—The Finance Committee recommended and it was agreed to make a loan of 3,770*l.* to the St. Pancras Borough Council for a housing scheme.

ALTERATIONS.—Various alterations are to be carried out at the Oldfield-road School, Hackney, at an estimated cost of 160*l.*, and minor improvements at the Sidney-road School, Hackney, at a cost of about 1,460*l.*

ALDWYCH.—The Improvements Committee reported that an offer had been received of 8,000*l.* a year for a lease of ninety-nine years for a part of Block R, Aldwych, and it is stated that it is proposed to erect an hotel on the site.

## COMPETITION NEWS.

### R.I.B.A. Prizes and Studentships.

The pamphlet of the Royal Institute announcing the subjects for the next competitions for students has now been issued. For the first time the Essay Medal is offered for a treatise to be chosen by the author. The subject set for the Soane Medallion is "A Terminal Railway Station," for the Tite Prize "The Façade of a Royal Palace in a City," and for the Grissell Prize "A Riding School."

### KING EDWARD MEMORIAL.

In the House of Commons, on the 5th inst., Colonel Burn asked the Hon. Member for the East Dorset Division, as representing the First Commissioner of Works, whether anything had been decided as to a site for the King Edward VII. Memorial; and would an opportunity be given for a full discussion in the House before anything was definitely settled.—Captain Guest, in reply, said: The Committee has recommended that the statue of King Edward VII. should be placed in the grass vista which leads from Piccadilly to the Queen Victoria Memorial. A model will be exhibited in the Tea Room as soon as it is completed. The question of discussion may perhaps be allowed to stand over until the model has been shown.—Earl Winterton: "Is there a chance of discussing the subject before the Committee's decision becomes binding on the country?"—Mr. Asquith: "Yes."—The Executive Committee of the King Edward Memorial Fund have approved, under certain conditions, the model submitted by Mr. Bertram Mackennal, A.R.A., and Mr. Edwin Lutyens for the statue of King Edward at the Piccadilly end of the Broad-walk.

## THE ARCHITECTURAL ASSOCIATION:

### FOURTH SPRING VISIT.

EXECUTED town-planning schemes in which one designer has been alike responsible for the disposition and form of the buildings are sufficiently uncommon in England to lend a particular interest to the Central-square at the Hampstead Garden Suburb, which was visited by the Architectural Association on Saturday, March 2. The site—a level plateau some 500 ft. each way—is almost ideal for its purpose, and the general scheme of laying-out adopted by Mr. Lutyens is a fine one. It consists of a square about 350 ft. across, open to the west (from whence it is commonly approached), facing which is the Institute centrally placed on the east, the south side closed by St. Jude's Church, and the north by another church described as "inter-denominational." Beyond these two churches to the north and south on either side of the square are other open "places," in shape long closed rectangles with approach roads centring with the transepts of the churches. The houses surrounding both of these squares and their approach roads are also included in the scope of Mr. Lutyens' scheme, which thus creates the entire picture. Other roads from eastward centre with the long axes of the two churches.

The buildings at present erected comprise the north block of the Institute—to be balanced eventually by a corresponding linked block—St. Jude's Church with its vicarage, the Free Church and its manse, and the greater part of the buildings round the north square and its approach road, Erskine-hill. All are treated externally in similar materials and in a generally homogeneous manner as to detail. The bulk of the walling is faced with silver-grey thin bricks with bright red dressings and a sparing use of stone in cornices, bands, and entrances. The roofs are tiled. The massing and detail are distinctively Mr. Lutyens', leaning towards the Wren manner of the Kensington Orangery and Hampton Court Palace. Only the public buildings were examined in detail by the members present, and in this they were greatly assisted by the selection of the architect's drawings, which was kindly placed on view in the Institute, these showing, among other things, the many points upon which original intentions had been curtailed or abandoned—as notably in the omission of a clearstory from St. Jude's.

Unquestionably the most interesting of the three buildings is the Church of St. Jude-on-the-Hill: helped by its lofty situation, the fine mass of its central tower tells admirably from many distant points, and the completion of its spire will make it even more striking. Externally the main building is little more than a very high-pitched roof rising almost from the ground, intersected by flush transepts of narrow span but equal ridge-height, and dominated by the lofty central tower and spire. From the low eaves rise tall dormer windows lighting the aisles, the remaining light of the interior being derived from large windows in the transept ends, a temporary west window and a clearstory on either side of the sanctuary, above the lower Lady Chapel and vestries respectively to north and south. A noteworthy feature externally is the absence of gutters and down pipes, the eaves dripping from a stone cornice into a paved channel round the wall base. The aisle walls are built hollow—a necessary precaution in such a case. Internally a one-bay aisleless sanctuary (eventually to be completed by an apsidal east end) and the space under the tower are each covered by pendentive domes in concrete plastered, with a ring of brick voussoirs marking off a saucer-dome above the pendentives. The aisled nave has a plastered concrete barrel-vault with brick arch-ribs. The main arcade is of brick, with lofty plastered pilasters rising to a bold stone cornice in each bay, and the effect is very massive and dignified. Opinion may be divided, however, as to the expediency of the constructional jugglery of the aisle roofs, which seem not only confused in appearance, but considerably out of harmony with the bold and simple scheme of the nave and sanctuary. The roof timbers are of Oregon pine, sandblasted, and are very pleasant in colour and surface. The choir at present occupy temporary seats in the sanctuary, but the plans provide for their eventual transference to the west end, where, above a vestibule between the church and a projected meeting hall, the organ will also be situated. The pulpit, altar, and some other fittings are from Mr. Lutyens' designs.

The Free Church is so designed as to balance the opposite building, in a general way the transept fronts, aisle wall, and main roof being similar, shortened in the eastern limb by the curtailment of the chancel, the east end being encircled by a range of low buildings and the crossing surmounted by a tiled cupola on an octagonal brick drum, not sufficiently important to rank as more than a central feature or to make the effect that of a domed church. The design of the east end is very cleverly managed, particularly the frank disposal of the chimneys from the rooms below. Internally the construction is reinforced concrete, and the extreme tenuity permitted by this material produces an open effect totally at variance with that of the church. The aisles are divided by orthodox Roman Doric columns and entablature, formed in plaster on the concrete construction, a plain barrel-vault covering nave, chancel, and transept, and a hemispherical dome the crossing. The external cupola is built up of timber on a reinforced concrete cone 30 ft. 6 in. high, and a copper-covered lantern projects above. Both churches are at present disfigured by temporary west fronts, but it must be regarded as a matter for satisfaction that the central features—spire and dome—are being carried to completion; such features are in like case so often deferred and eventually abandoned.

## FIRE PROTECTION IN PARIS.

THE British Fire Prevention Committee has issued a Report on the fire protective arrangements in Paris, the Report comprising an illustrated volume of some 110 pages, profusely illustrated from photographs, and having been prepared by a Special Commission, which included the Earl of Londesborough, K.C.V.O., Messrs. Edwin O. Sachs, F.R.S.Ed., Horace S. Folker, F.A.I., Ellis Marsland, District Surveyor, and others closely connected with the subject.

Besides giving a detailed record of what the Commission considered instructive, the Report is prefaced by a number of observations and impressions which should be of considerable importance to the fire protective work in this country, as also in the Colonies, the data being prepared in such a manner as to be of use to the various authorities concerned.

The Paris Fire Brigade Regiment is dealt with at considerable length. This brigade is fast becoming a motor fire brigade, and, being a military body conducted on modern lines, is remarkably well disciplined and of splendid physique. The fire preventive measures as to shops, warehouses, theatres, and tube railways are dealt with in detail. These excellent precautionary measures are mainly due to the initiative of the well-known police Prefect, Monsieur Lepine, whose mobile cyclist police squadrons are also illustrated, as also his river police, which is equipped with fire floats.

The National Fire Service, the Paris Suburban Fire Brigades, the fire precautions at great establishments outside Paris, like those of some of the great gasworks, are reported upon, as also the organisation of the French Fire Service Federation.

The whole subject is fully reviewed by the British Fire Prevention Committee with reference to both the national and local aspect, and the many illustrations are supplemented by a coloured map of Paris, and include as frontispiece the well-known picture illustrating the death of the late Colonel Froidevaux, of the Paris Brigade, at a great factory fire in 1882. We give an illustration, taken from the Report, of the trophy won by the Paris Fire Brigade in the National Inter-Regimental Gymnastic Competition of the French Army.

**Trophy won by the Paris Fire Brigade.**

## ARCHITECTURAL SOCIETIES.

### The Society of Architects.

The fifth ordinary meeting of the Society of Architects for the Session 1911-12 was held at No. 28, Bedford-square, W.C., on March 7.

Mr. Percy B. Tubbs, F.R.I.B.A. (Vice-President), presided, in the unavoidable absence of the President.

The ballot was taken, and the following candidates were declared to be duly elected:—

*As Members.*

E. O. Brown, Gravesend
A. E. Chasemore, London
P. R. Fincher, Penywern, Neath
W. J. Kemp, jun., Muswell-hill, N.
J. M. Miller, Montreal.

*As Students.*

W. Brooke, Cleckheaton
H. S. Clark, St. John's Wood, N.W.
M. Evans, Kensington, Liverpool
R. C. E. Griffiths, Bridgend
F. C. Haslam, Grays
F. Holt, New Brighton
W. H. Marley, Barry
W. A. Miller, East Finchley
W. H. Rebbeck Frome
R. H. Richardson, Wood Green, N.
C. S. Rhodes, Lytham
J. E. Sanders, Liverpool
T. Scott, Lemington-on-Tyne
T. E. Turner, Hampstead, N.W.
A. Tutton, Gravesend

Mr. A. Alban H. Scott (member of Council) then read a paper on "The Testing of Materials for Reinforced Concrete," and a discussion followed. Our report will be given next week.

### Devon and Exeter Architectural Society: Annual Meeting at Exeter.

The annual meeting of this Society, which embraces the counties of Devon and Cornwall, in alliance with the Royal Institute of British Architects, was held on the 9th inst. at the Half-Moon Hotel, Exeter, the President, Mr. James Jerman, F.R.I.B.A., of Exeter, being in the Chair, and among those present were—Messrs. J. M. Pinn, J. Crocker, J. A. Lucas, S. Dobell, B. H. Palmer, T. A. Andrews, L. Tonar, O. Ralling, A. Stevens, A. N. Tucker (Exeter), W. H. May, A. S. Parker, B. P. Shires, E. Coath-Adams, R. H. Arthur, H. Watts, C. H. L. Varcoe, B. W. S. S. Baily (Plymouth), and Allan J. Pinn, Hon. Secretary.

The annual Report was presented by the Hon. Secretary, and the balance-sheet was presented by the Hon. Treasurer (Mr. S. Dobell).

The retiring President, Mr. James Jerman, then delivered an address, an abstract of which appears on p. 313.

A cordial vote of thanks was proposed by Mr. B. P. Shires to the President for his address, and also for the able manner in which he had discharged the duties of his office during the past year. This was seconded by Mr. James Crocker and carried by acclamation.

The meeting proceeded to elect the officers for the ensuing year, as follows:—Mr. E. Coath-Adams, M.S.A. (Plymouth), President. Mr. J. A. Lucas, A.R.I.B.A. (Exeter), Vice-President. Messrs. J. M. Pinn, L. F. Tonar, T. A. Andrews (Exeter), R. H. Arthur (Plymouth) to fill vacancies on the Council of those retiring, as well as those remaining in office, viz., H. L. Thornely, F.R.I.B.A., Sampson Hill (Redruth), and the two Past-Presidents, Messrs. W. H. May, M.S.A. (Plymouth), and James Jerman, F.R.I.B.A. (Exeter). Mr. S. Dobell, Hon. Treasurer, and Mr. Allan J. Pinn, A.R.I.B.A., Hon Secretary.

The retiring President proposed a hearty vote of thanks to the Hon. Treasurer and Hon. Secretary for their services during the past year, and bore testimony to the very efficient manner in which they had carried on the business of the Society. This was carried by acclamation, and Messrs. Dobell and Pinn returned thanks for the further confidence reposed in them.

The newly-elected President, Mr. E. Coath-Adams, in taking the Chair, thanked the members for the honour they had done him, and felt sure that he should receive the support of the members and the able assistance of the Secretary in carrying out the duties of his office.

Mr. E. Coath-Adams then proposed a vote of thanks to the retiring President, Mr. James Jerman, which was seconded by Mr. S. Dobell and carried, to which Mr. Jerman replied, saying the great pleasure it had been to render any assistance to the Society, and that his duties had been lightened by the constant and ready help he had at all times received from the Hon. Secretary.

Subsequently the members lunched together, at which the toast of the King was followed by that of the healths of the President and Vice-President, and the President gave "Success to our Profession."

During the day the visiting members were shown the various points of interest in the City, under the guidance of the President, Mr. James Jerman, and amongst those visited were the Rougemont Grounds, Law Library, the Bishop's Palace, the Cathedral, College Hall, Guildhall, and several churches and mediæval buildings.

The thanks of the Society were expressed to those who had so kindly given permission for visiting the various buildings.

### Aberdeen Architectural Association.

At a recent meeting of the Aberdeen Architectural Association Mr. J. A. Ogg Allan, architect, delivered a lecture on "The Educational Buildings of America." The lecturer limited himself to the description of the elementary and secondary schools of four cities—New York, Chicago, Boston, and St. Louis—want of time preventing him from describing the university and technical college buildings he had visited. In America there are diversities owing to condition of climate, etc., and there is no such uniform type as prevails in this country and in Germany, as every State has its own way of doing things, and controls its own educational affairs. In New York the problem to be solved is rendered more difficult owing to the value of building land, the city being built on the narrow tongue of land known as Manhattan Island. Some school sites have cost as much as 140,000*l.* and accommodation provided for as many as 4,000 pupils in one building. The site is usually on a lot facing two streets and bounded by buildings on the two sides. The plan is in the form of the letter H, and in the basement under the play-yards are provided a large "auditorium" and an elaborately equipped gymnasium. The classrooms are arranged in the stories above, and ample staircase accommodation is provided. In Chicago a somewhat similar type prevails, but more room is available for sites, and lighting can be got from all sides. Boston has still larger sites, and there many small schools have been built in addition to larger buildings. St. Louis has still more available space, and the prevailing type is the "E" plan. The buildings are lower, consisting of two stories and basement, while the "auditorium" is omitted. Mr. Allan showed by means of lantern slides many plans of schools in these four cities, with photographic views of the exteriors and interiors, and he explained the details of arrangement and equipment, the latter being much better than in this country. Single desks for all pupils and shallow baths are provided, and there are such matters as electrically controlled clocks and telephones from the master's room, vacuum cleaners, etc.

### Glasgow Institute of Architects.

The annual general meeting of the Glasgow Institute of Architects was held on the 6th inst. in the premises of the Institution of Engineers and Shipbuilders, 39, Elmbank-crescent, Mr. J. B. Wilson, the President, in the chair.

Mr. C. J. MacLean, the Secretary, submitted the forty-fourth annual Report. It stated that fourteen new members were admitted as Fellows during the year, and that sixteen new Associate members and three new student members were enrolled. The membership of the Institute now stood as follows:—113 Fellows, seventy-six Associates, thirty-two lay and twenty-two student members, giving a total of 243. During the past year the Council was actively engaged in formulating the scheme for the better regulation of competitions which has now been adopted by the Institute, and in terms of the new Articles of Association the following resolution was passed by the Council and approved of at a general meeting of Fellows and Associate members, viz.:—"Any Fellow or Associate member shall be considered to have been guilty of professional misconduct in terms of the Memorandum and Articles of Association of the Institute, and shall be liable to the penalties therein stated, if it be found by the Council either (1) that he has knowingly submitted, directly or indirectly, a design in any competition which has previously been the subject of a notice by the Council or by the Committee on Public Architecture and Competitions, prohibiting members of the Institute from taking part in the same; or (2) that he has knowingly solicited the promoters for permission to submit a design in a limited competition after the leet has been closed." The scheme which was put before the Institute after long and careful consideration by the Council is, the Report stated, similar to that of the Royal Institute, by which it has been approved. A like course of action has been adopted by several of the allied societies in their respective districts, and the Council is in communication with all those in Scotland toward securing similar procedure on their part where not already in force. The Council hopes under the powers now granted to it to be able to deal more effectively with the apparently increasing number of unsatisfactory competitions. The Council had under consideration the proposal that the extension of the Municipal Buildings should be carried out by the City Engineer's Department, and a letter protesting against this course of action was forwarded to the Corporation. It was noted with satisfaction that the Corporation remitted the proposal back to the Committee for reconsideration. The Council, the Report further stated, accorded its cordial support to a proposal that an exhibition of the town planning drawings exhibited in London last year, and more recently in such centres as Edinburgh and Dublin, should be held in Glasgow. In co-operation with the local branch of the Garden Cities and Town Planning Association a letter was forwarded to the Town Council asking them to give the proposal their support. A reply was received from the Town Clerk stating that the matter had been remitted to a Sub-Committee to consider as to inviting the exhibition to Glasgow at an early date. Recognising the importance of the Scottish National Conference on Housing and Town Planning Administration to be held in Glasgow on March 19 and 20 next, the Council has, on the invitation of the Standing Advisory Committee of the Conference, appointed the whole of its members as delegates on behalf of the Institute.

The Chairman proposed the adoption of the Report. He referred to the recently instituted Licentiate section of the Royal Institute of British Architects, and said he was pleased to say that the response from their province had been very gratifying, and that from what he personally saw during his term upon the Royal Institute Council, not only in numbers had the Glasgow Province been equal to any section of the kingdom, but in quality also. He said it was pleasant to know that the Town Council, awakened at last either by a sense of duty or emulation of other cities, proposed to encourage or assist a Town Planning Exhibition and Conference in Glasgow. The exhibition could be but a shadow of what it might have been had they accepted the offer made them last year, as the bulk of the best drawings were not now available; but it was something to know that at last they recognised that town planning had interests beyond these merely of architects and builders, and that it concerned the municipality and the public most of all. The Corporation having seen the error of their ways in relation to this matter, they might hope for better and saner procedure in other civic matters which nearly concern them as architects and in which they had recently ventured respectfully to enter their protest. He referred, of course, to the large and rapidly increasing amount of municipal building work emanating from the City Engineer's office. At present the Art Galleries, the rebuilding of the historic Tontine, and the extension of the Municipal Buildings—work all calling for high architectural skill—was being, and proposed to be, designed and controlled from an "Engineer's Department." Not only as ratepayers, in the city's interest, but as architects, proud of the architectural reputation of their city, they desired to show that the skill of the past had not departed and that their public buildings should be worthy of them and of the city to which they were proud to belong. Referring to the new regulations for competitions, he said these had been adopted by the Institute and homologated by the Royal Institute of British Architects, and he trusted such public bodies, committees, or individuals who were proposing competitions would recognise that their desire was not to be antagonistic but helpful.

Mr. Alexander N. Paterson seconded the Report and financial statement, which were adopted.

The Council for the ensuing year was elected as follows:—Messrs. John B. Wilson, John Watson, J. K. Hunter, Alexander N. Paterson, W. G. Rowan, John Fairweather, Charles R. Mackintosh, Robert Wemyss, James Lochhead, James M. Monro, George A. Paterson, Alexander M'Gibbon, Ninian Macwhannell, James Lindsay, James H. Craigie, William B. Whitie, Alan G. MacNaughtan, and Alexander Wright.

The retiring President was heartily thanked for his services in promoting the interests of the Institute.

## GENERAL NEWS.

### Professional Announcements.

Mr. George H. Wenyon, architect, Castle Hill, Dudley, has given up his practice at Dudley and Tipton, and is going abroad for his health. Messrs. Thompson & Warmington, solicitors, Dudley, will receive any communications on his behalf.

The partnership hitherto existing between Mr. T. W. Haigh, architect and surveyor, 2, Exchange-street East, Liverpool, and Mr. Ernest S. Thompson has been dissolved as from November 24 last. Mr. Thompson retires from the practice, which will in future be carried on by Mr. T. W. Haigh under his own name.

Mr. H. Guicharde Todd, F.S.A.(Scot.), M.S.A., architect and surveyor, has changed his address from 6, Cheapside, London, E.C., to Southampton House, 317, High Holborn, W.C. His telephone number is Holborn 627.

### The Mansions of England.

Mr. William Heinemann is issuing a facsimile reprint of Joseph Nash's "The Mansions of England in the Olden Time." The new edition, a large 4to as the original, contains, in addition to the plates, a Preface by Mr. Reginald Blomfield, A.R.A.

### Art Museums and Picture-Galleries.

Mr. Edwin T. Hall will read a paper on art museums and picture-galleries at the general meeting of the Royal Institute of British Architects, fixed for April 1. The illustrations will include a fine collection of slides specially prepared for the paper. Mr. Hall's paper is in substitution of that on "Modern Methods of Construction," which Mr. Dunn is unable to read.

### The Mural Painting Exhibition.

The committee of the forthcoming exhibition of Designs for Mural Paintings and for the Decoration of Schools, etc., have now issued a final circular containing full particulars of the competitions offered to artists, and of the exhibits which it is hoped to secure. The Exhibition will be opened at Crosby Hall, Chelsea, on Saturday, June 1, and a number of definite offers of wall-spaces to be decorated, and of funds to bear the expenses, have already been secured. The circulars will be sent to anyone interested on application to the Hon. Secretaries, Mural Decoration Committee, Crosby Hall, S.W.

### Petersfield Main Sewerage.

The Petersfield Urban District Council have instructed Mr. Harry W. Taylor, A.M.Inst.C.E. (Messrs. Taylor & Wallin), Newcastle-upon-Tyne and Birmingham, to report upon improvements of the existing main sewerage of the town.

### The Photographic Survey of Surrey.

From the ninth annual Report for 1910 of the Council of the Photographic Survey and Record of Surrey we learn that during the past year 482 photographs have been received and recorded, this being a decrease of 108 on 1909. The photographs received are classified as follows:—Architecture, 177; Art and Literature, 235; Anthropology and Antiquities, 11; Geology, 1; Natural History, 1; Topography and Passing Events, 57. Total brought forward from last Report, 4,293. As to the architectural prints contributed, they include Chertsey, Frensham, and Churt, and the district around Godalming has received attention by a member who has sent in twenty-six prints from this neighbourhood. Besides these, prints have been received of streets in old Croydon, of Farnham, Tadworth, Walton-on-the-Hill, Walton-on-Thames, Nutfield, Godstone, Bletchingly, Redhill, Thursley, Hindhead, Compton, Lingfield, Epsom, and Pirbright.

### Commons and Footpaths Preservation Society.

Lord Eversley presided over the monthly meeting of the Commons and Footpaths Preservation Society held at 25, Victoria-street, S.W. A letter was read from Sir T. Fowell Buxton and Mr. E. N. Buxton forwarding a contribution of 200 guineas in celebration of their golden weddings and in commemoration of their forty-seven years' connexion with the Society. The solicitor, Mr. Percival Birkett, reported that the Bill of the Metropolitan Railway Company had now been amended so that the proposed new line from Rickmansworth to Watford would stop short of Cassiobury Park, instead of bisecting that open space. It was also stated that negotiations were taking place in regard to the provisions of the West Ham Corporation Bill, under which 4 acres of Wanstead Flats will be taken. It was decided to oppose the Woking District Gas Bill, under which 4½ acres of Horsell Common would be enclosed. It was reported that the National Trust had agreed to take up the Society's scheme for the purchase, for 1,250*l.*, of the manorial interests in Minchinhampton Common, Glos., over 600 acres in extent. The purchase fund already amounted to 620*l.*

### International Smoke Abatement Exhibition.

Particulars have now been issued of the arrangements in connexion with the Conferences of Delegates of Municipal Authorities and other bodies to be held at the Royal Agricultural Hall in connexion with the International Smoke Abatement Exhibition. The Conferences will take place on the 26th, 27th, and 28th inst., the respective Chairmen being Sir William Ramsay, K.C.B., F.R.S. (President British Association); Sir William Richmond, K.C.B., R.A.; and Lord Justice Fletcher Moulton. The Conferences are divided into three sections to consider: (*a*) Smoke Pollution and Its Effects; (*b*) Smoke Abatement; and (*c*) Law and Legislation. Amongst the numerous papers to be considered are those on "The Action of Coal Smoke on Building Stones and Mural Paintings" (Sir Arthur Church, K.C.V.O., F.R.S.); "The Effects of Town Air on Metalwork" (Dr. S. Rideal, D.Sc., F.I.C.); "The Economic Aspect of Smoke Abatement" (Dr. R. Lessing, Ph.D., F.C.S.); "Inference of Smoke on Pigments" (Mr. Noel Heaton); "Kew Gardens and Smoke" (Mr. W. J. Bean, Assistant Curator, Kew Gardens); "Should the Domestic Smoke Nuisance be Any Longer Tolerated?" (Bailie W. Smith, of Glasgow); "The Smoke Problem in the U.S.A." (Mr. Z. A. Willard, of Boston); "Smoke Abatement Laws in Other Countries" (Mr. Julian S. Corbett, LL.M.); "Is Further Legislation Necessary?" (Mr. Joseph Hurst, Barrister-at-Law); "The Proposed Smoke Abatement Bill" (Principal J. W. Graham); "A Plea for the Appointment of a Royal Commission" (Dr. H. A. Des Voeux, Treasurer, Coal Smoke Abatement Society). In addition to the papers special lectures are being organised on the different phases of the Smoke Abatement Movement.

### Geology of Tavistock.

The Board of Agriculture and Fisheries desire to give notice of the publication of a new colour-printed Sheet No. 337 of the Geological Survey map on the 1-in. scale, and, in explanation of the map, a Memoir of the Geological Survey on the Geology of the Country around Tavistock and Launceston. This memoir describes the geology of the area covered by the 1-in. colour-printed map Sheet 337, including part of Bodmin Moor and the country around Tavistock and Launceston. After an Introductory Chapter, Chapters II. and III. are devoted to the Devonian and carboniferous rocks; Chapter IV. describes the igneous rocks earlier than the granite intrusion; Chapters V. and VI. deal with the granite and its surrounding aureole of metamorphism; Chapter VII. relates to the Drift, and Chapter VIII. to Economics. The memoir is illustrated by two plates of geological structures, and one of photomicrographs. Copies may be obtained from any agents for the sale of Ordnance Survey Maps, or, through any bookseller, from Mr. T. Fisher Unwin, 1, Adelphi-terrace, London, W.C. The price of the map is 1s. 6d., and the memoir, 3s.

### Cambridge University.

The Sites Syndicate have recommended that for the increased accommodation required by the School of Agriculture an extension should be made, westwards, of the present building, near Tennis Court-road, and that for the Forestry Department a site should be allotted in the south-eastern portion of the ground bought from Downing College. Mr. Bruce Joy designed the memorial which is being erected in Jesus College Chapel to Thomas Cranmer, who was a Fellow of the College.

## THE NEW COUNTY HALL.

THE King and Queen, accompanied by the Prince of Wales and Princess Mary, visited the site of the new County Hall at Westminster Bridge on Saturday last, when his Majesty laid the foundation-stone of the building. As the result of open competition, Mr. Ralph Knott's design for the new building was declared to be the most suitable, and in 1909 a start was made with the construction of the embankment wall. The wall was successfully completed by September, 1910, at a total cost of 58,000*l.* The plan of the principal floor of the new County Hall indicates a building 750 ft. long with an average width of 310 ft. The building is to consist of nine stories, of which the two lowest, being below the road level, will be utilised for storage purposes. The principal floor will be mainly devoted to the Council Chamber, lobbies, and committee-rooms, but there will also be accommodation for chief officers whose duties necessitate close attendance upon the Council's committees. The remaining floors will be allocated to the staffs of the various departments. The Council Chamber will be 3,500 sq. ft. in area and 55 ft. in height, with galleries for the accommodation of the Press and public. On that portion of the site which is to be built on at present accommodation is provided for a staff of 2,270.

The external elevations of the frontages to the river, to Westminster Bridge-road, and to Belvedere-road will be of Portland stone on a base of granite. The scheme as originally approved by the Council was estimated to cost 1,706,000*l.*, but it has now been decided to exclude the site of Messrs. Holloway's premises from the scheme. The estimated cost is accordingly reduced to 1,412,000*l.* The building has been designed and planned by the selected architect, Mr. Ralph Knott, in collaboration with the County Council's official architect, Mr. W. E. Riley, and the embankment wall was designed by the Council's Chief Engineer, Sir Maurice Fitzmaurice.

Illustrations of the building have appeared in the *Builder* for February 8 and 15, 1908; August 1, 1908; September 10, 1910.

In connexion with the ceremony of laying the foundation-stone of the new County Hall, the following gentlemen had the honour of being presented to their Majesties:—The Chairmen of the General Purposes Committee and the Establishment Committee, the Architects of the Building and the Council, the Chief Engineer and the Valuer. At the conclusion of the ceremony the King and Queen were conducted to the Withdrawing Room, where the Chairman of the Council presented to their Majesties copies (specially bound in covers made by students at the Council's Central School of Arts and Crafts) of a descriptive account of the New Hall, after which the King and Queen signed the Council's record. The King conferred the honour of Knighthood upon Mr. Edward White and Mr. Maurice Fitzmaurice.

## FIFTY YEARS AGO.

**From the *Builder* of March 15, 1862.**

### The Cost of Soot.

IN connexion with the British and Indian Army estimates, an honourable Member called attention lately in the House of Commons to a charge of 5,891*l.* for sweeping chimneys. If it cost such a large sum for the clearing of the chimneys of the offices, barracks, etc., connected with our Army, how great must be that of sweeping all the chimneys in the British Empire? If this sum may be taken as affording something like a scale for the amount expended for chimney-sweeping by the British population who use chimneys, the annual charge would amount to nearly a million sterling. This sum, large as it is, is probably not over the mark, if we remember in the metropolis alone how many houses there are of which every room is inhabited. And how much are we to add as the cost of fuel which is wasted in the formation of all this soot? Various improvements have been made of late in the construction of fireplaces in both manufactories and dwellings; notwithstanding, great would be the public benefactor who would provide us with a sure means of economically consuming the chimney smoke.

## EDITORIAL SUMMARY.

In our leading article, "Why Employ Architects?" we deal with several aspects of the question.

An illustrated article on "A Florentine Palace" (p. 290) deals with the Palazzo Davanzati.

In "Notes" columns (p. 291) will be found observations on: "The Preservation of Ancient Monuments"; "Combined Heating and Power Plant"; "Lambeth Bridge"; "The Associates and the R.I.B.A."; "The Improvement of London"; "The New Indian Capital."

A meeting of the Architectural Association was held on Monday, when papers were read on "American Architecture" (see p. 292).

A report of the Fourth Spring Visit of the Architectural Association, to the Central Square at the Hampstead Garden Suburb, is given on p. 297.

Brief reports of meetings of the following Architectural Societies are given on p. 297: "Glasgow Institute of Architects"; "Aberdeen Architectural Association"; "Devon and Exeter Architectural Society"; "Society of Architects."

In Correspondence columns (p. 300) will be found letters on: "Trade Unionism and Restraint of Trade"; "Padbury *v.* Holliday, Ltd."

The Monthly Illustrated Historical Review (p. 301) includes: "The Architecture of Portugal"—I.; "The English House from the Normans to the Tudors"; and "Notes."

The Building Trade Section (p. 306) includes: "The Manchester Building Trades Exhibition"; "London Association of Master Decorators"; "Projected New Buildings in the Provinces"; "Applications under the London Building Acts."

An abstract of the sixth Carpenters' Hall Lecture, by Mr. M. H. Baillie Scott, on "House Building, Past and Present," appears on p. 310.

"Form and Vision in Reference to Art" was the title of a recent lecture at Carpenters' Hall, an abstract of which appears on p. 311.

An abstract of a paper on "Church Restoration" is given on p. 312.

On p. 313 some notes from the Presidential Address of Mr. James Jerman before the Devon and Exeter Architectural Society are given.

In our Law Report columns on p. 314 is given: "Pratt & Co., Ltd. *v.* W. F. Frith."

## MEETINGS.

FRIDAY, MARCH 15.

*Institution of Mechanical Engineers.*—Dr. Rudolf Diesel on "The Diesel Oil Engine." 8 p.m.

*Royal Sanitary Institute.*—Mr. H. Phillips Fletcher on "Ventilation, Warming, and Lighting." 7 p.m.

*Glasgow Architectural Craftsmen's Society (Technical College).*—Mr. A. H. Purdie on "Some Practical Considerations on the Measuring and Valuing of Mason and Brickwork."

*South-Western Polytechnic Institute, Chelsea.*—Sir David Gill, K.C.B., F.R.S., will present prizes and certificates to students of Evening Classes and Day College. 8 p.m. (Laboratories and workshops open to public inspection at 9.15 p.m.)

SATURDAY, MARCH 16.

*Architectural Association.*—Fifth Spring Visit, to King's College Hospital, Denmark-hill. Meet at the building, 3 p.m.

*The Royal Institution.*—Professor Sir J. J. Thomson, M.A., LL.D., D.Sc., F.R.S., on "Molecular Physics"—(IV). 3 p.m.

MONDAY, MARCH 18.

*Royal Institute of British Architects.*—Mr. W. H. Ward, M.A., on "The Architecture of the French Renaissance." 8 p.m.

*Royal Society of Arts.*—Mr. Noel Heaton, B.Sc. F.C.S., on "Materials and Methods of Decorative Painting"—(I). 8 p.m.

*Royal Sanitary Institute.*—Mr. W. E. Fretwell on "Details of Plumbers' Work." 7 p.m.

*Liverpool Architectural Society (Incorporated).*—Mr. J. Hubert Worthington, M.A., on "The Inspiration of Florence." 6 p.m.

*Institute of Sanitary Engineers (Caxton Hall, Westminster).*—Mr. Fraser on "The Modern Home." 8.15 p.m.

TUESDAY, MARCH 19.

*Northampton Polytechnic Institute (Illuminating Engineering).*—Mr. W. E. Goodenough on "The Practical Use of Gas Lamps." 7.30 p.m.

*The Illuminating Engineering Society (Royal Society of Arts, John-street, Adelphi).*—Papers on the "Lighting of Printing Works and Offices" will be read by Mr. F. W. Goodenough (Gas Light and Coke Company), and Mr. Justus Eck (Union Electric Company). 8 p.m.

*The Institution of Civil Engineers.*—Papers on "The Main Drainage of Glasgow," by Messrs. A. B. McDonald and G. M. Taylor, MM.Inst.C.E.; "The Construction of the Glasgow Main Drainage Works," by Mr. W. C. Easton, B.Sc., M.Inst.C.E.; "Glasgow Main Drainage: The Mechanical Equipment of the Western Works and of the Kinning Park Pumping Station," by Mr. D. H. Morton, M.Inst.C.E. 8 p.m.

WEDNESDAY, MARCH 20.

*Carpenters' Hall, London-wall (Lectures on Arts Connected with Building).*—Mr. W. R. Hoare on "The Craft of the Brick and Tile Maker." 7.45 p.m.

*Edinburgh Architectural Association.*—Mr. J. Campbell Mitchell, A.R.S.A., on "The Study of Nature by the Student of Decorative Art." 8 p.m.

*Royal Sanitary Institute.*—Mr. Henry C. Adams, Assoc.M.Inst.C.E., on "Sewerage." 7 p.m.

*Northern Architectural Association.*—Annual meeting. 7.30 p.m.

THURSDAY, MARCH 21.

*Carpenters' Hall, London-wall.*—Professor Wm. Somerville, M.A., D.Sc., on "The Forests of North America." 8 p.m.

*Society of Antiquaries.*—8 p.m.

*The Institution of Electrical Engineers.*—Discussion, to be opened by Mr. S. Z. de Ferranti, President, on the following subject: "The Causes Preventing the More General Use of Electricity for Domestic Purposes." 8 p.m.

FRIDAY, MARCH 22.

*Royal Sanitary Institute.*—Mr. Henry C. Adams, Assoc.M.Inst.C.E., on "Sewage Disposal." 7 p.m.

*Leicester and Leicestershire Society of Architects (Students' Evening).*—Introduction to discussion on the R.I.B.A. Report on Reinforced Concrete, by Mr. W. Keay, A.M.Inst.C.E.

*Aberdeen Architectural Association.*—Mr. A. N. Paterson, M.A., A.R.S.A., on "French Influence on Scottish Architecture." 7.30 p.m.

## BOOK RECEIVED.

SMALL WATER SUPPLIES. By F. Noel Taylor. (London: B. T. Batsford. 6s. net.)

## CORRESPONDENCE.

### Trade Unionism and Restraint of Trade.

SIR,—I brought the letter published by you in your issue of February 23 last before my Council, and the happy experience of the writer was warmly extolled as "lovely and innocent." The paradise of exemption and industry in which "X." has dwelt was the envy of everyone present. His ignorance is touching. That there is no society rule limiting the amount of work to be done by workmen is admitted, but the unwritten law as to the practice has been materially and expensively brought home time after time to every builder I have ever met. It is difficult to take "X.'s" letter seriously. He cannot be an employer at all or he would realise the absurdity of his letter.

SECRETARY,
THE INSTITUTE OF BUILDERS.
*Kingsway, London.*

### East Sussex Hospital Competition.

A copy of the following letter to the Editor of the *Hospital* has been sent to us:—

SIR,—You have been good enough to forward me a marked copy of last week's issue of the *Hospital*, in which attention is particularly drawn to some criticisms upon the award of this competition and reflections upon the system of judging generally.

The jury system which appears so desirable to you has been under consideration for many years by architects who are most intimately concerned in the matter. It has also been tried on more than one notable occasion, but the results have scarcely been such as to recommend it.

The whole system of competition is open to grave objection, although it must be acknowledged that it has some redeeming features. I venture to think, however, the pros and cons of a purely architectural question such as this is scarcely likely to be of interest to the majority of your readers. Neither is it necessary to trespass upon the space you may be good enough to allow me by dealing point by point with your correspondents' criticisms, which are so easy to make. They will be convincing to no one but such of the unsuccessful competitors who lack the instinct of true sportsmen.

I except one point, which, if left uncontradicted, may receive a certain amount of general credence. It is such a common grievance in competitions. Your correspondents respectively state that:—

"The Committee fixed the sum of 35,000*l.* (roughly, 350*l.* per bed) as the total cost for an up-to-date hospital, and the cost was stipulated as being an essential in the selection, 35,000*l.* being the sum the Committee would have available."

The best answer to these misleading statements is to quote the actual condition, which was as follows, viz.:—

"The Committee think that 35,000*l.* is the maximum that they will have at their disposal for the whole hospital, and while they require the hospital to be up to date in all particulars, preference will be given to a design within that sum if possible, but competitors must use their discretion in designing if they think that amount insufficient."

No honest reading of this clause suggests that the question of cost was essential.

For the rest, no good award is ever made in consideration of one or two points, but on a general survey of the design from every point of view. In other words, the best design is that which combines the greatest number of good points and the least number of errors; and as to these, an assessor who has given many hours to the study of the plans must be a better judge than your anonymous F.R.I.B.A.'s. By the way, it would be interesting to have their names, and especially to know if either of them competed.

The assessor's character and his work as a hospital architect are too well known to be questioned, and your correspondents' criticisms will probably cause him more amusement than annoyance.

I should like to take the opportunity of correcting a wrong but somewhat general impression. The authors of the successful design are my brother, Mr. John Saxon Snell, and Mr. Stanley M. Spoor, some time my pupil, not your humble servant.

Of the merits of their design it does not become me to speak, but I think no unprejudiced critic will dispute its general excellence.

A. SAXON SNELL.

### Padbury *v.* Holliday, Ltd.

SIR,—"Sub-Contractor's" reply to my letter, while agreeing to the necessity of having a proper contract between builder and sub-contractor, branches off into a side issue, in which he depreciates the builder and points out the vast improvements in building work consequent upon the initiative of sub-contractors.

However, the object in my original letter was in reference to the necessity of a sub-contractors' agreement, and I do not propose to make any comment on your correspondent's remarks, which have no bearing on the subject.

I quite agree with his ideas that the agreement adopted should be a fair one, and that the original contract should form the basis of the agreement, and I venture to think it would be to the interests of architects, builders, and sub-contractors if the latter did, as your correspondent suggests, form an association. Then, and then only, would the builder avoid the controversy there invariably is with independent firms of sub-contractors as to whether they should accept their own responsibilities or pass them on to the already overburdened builder.

F. J. GAYER
(E. A. Roome & Co.).

## ILLUSTRATIONS.

### New Church of St. Luke, West Hartlepool.

THIS is the successful design in a limited competition in which Mr. W. D. Caröe was assessor. The strictest economy had to be studied, and the conditions required the building to be of stone. The cost will be 6,000*l.* exclusive of top of tower. The walls externally are to be faced with local rubble walling, and internally with plaster, while the stone dressings will be in Carlton or other local sandstone.

It is owing to the shape of the site, which is situated at the corner of Hart-lane and Tunstall-avenue, that the plan is rather wide in proportion.

### The Palazzo Davanzati, Florence.

THESE illustrations are given in connexion with an article on p. 290, wherein they are referred to.

# MONTHLY HISTORICAL REVIEW.

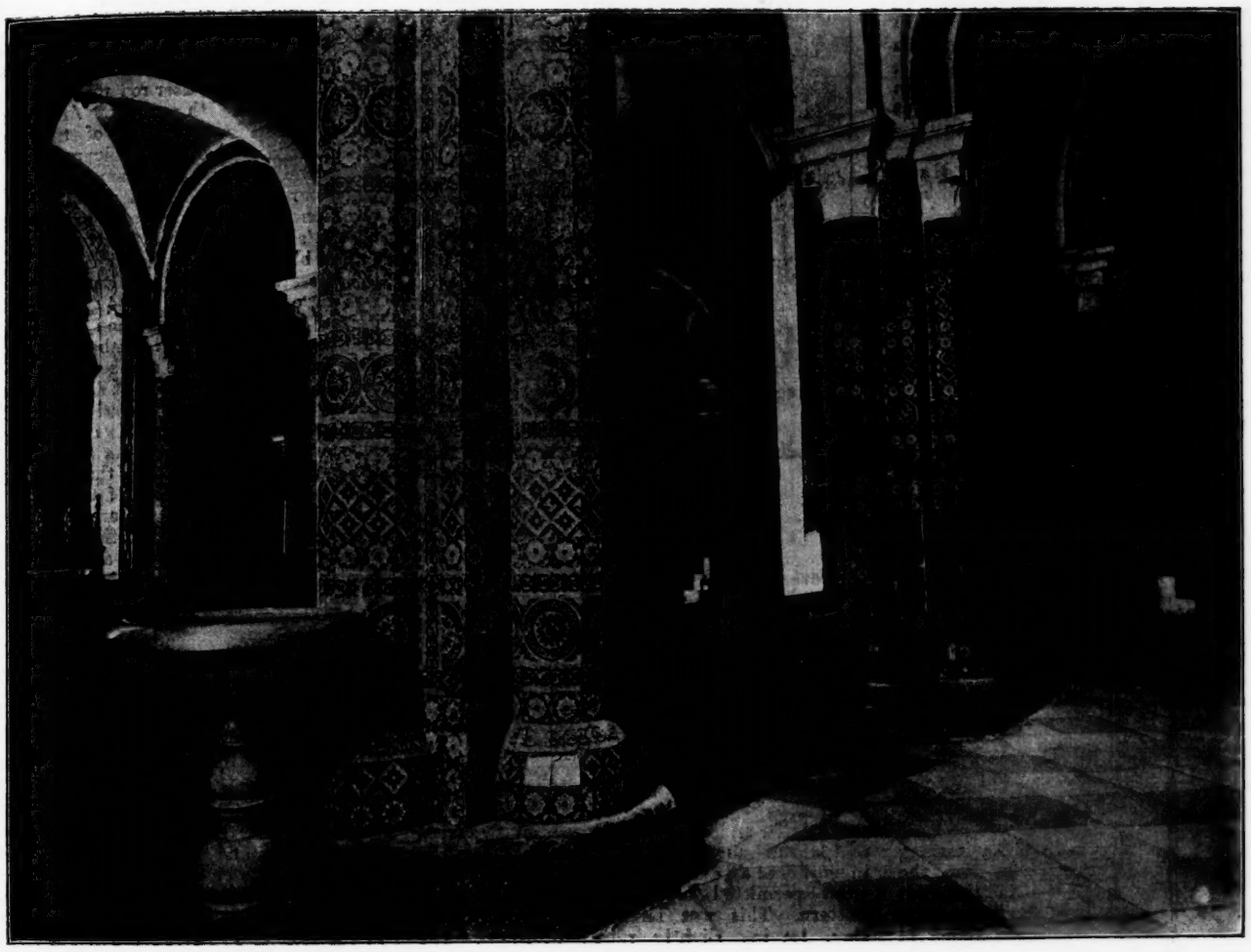


**Fig. 1. Old Cathedral of Coimbra before Restoration.**

## THE ARCHITECTURE OF PORTUGAL.—I.

PORTUGAL sits apart from her sister nations—

"A jewelled coronet gracing Europe's brow,
Where fails the land and ocean's realm begins,"

as her own Camoens has sung of her.

Accessible only by sea or through the broad territories of Spain, herself a country relatively little travelled in, she has till recent years been one of the last corners of Europe that the tourist, casting about for fresh realms to conquer, would hit upon as the scene of a holiday. This was especially the case with the architectural student. It was considered scarcely worth while facing the comparatively greater difficulties of reaching such a destination, since it was suspected that there was little at the journey's end to reward the intrepid explorer. So little known, indeed, was the architecture of Portugal, so scarce the means of information on the subject half a century ago, that Fergusson was obliged to confess his inability to do more than touch upon one or two of the best-known monuments, and these he dismisses rather disparagingly. Since his day things have greatly altered. Portugal has become of easier access. Lisbon is reached in comfort—to the seaworthy at least—by several steamship lines in two and a half or three days from Southampton, and the Republic possesses a good, if not very rapid, railway system, so that in a holiday of, say, three weeks or a month the principal points of architectural interest can be visited. Again, the literature of the subject has considerably increased. Not only has the inevitable German *savant* written on the subject (cf., for instance, C. Uhde's "Baudenkmäler in Spanien und Portugal," 1892, A. Haupt's "Baukunst der Renaissance in Portugal," 1890-5), but Portuguese students have investigated many dark corners of their own art history. More recently our countryman, Mr. Crum Watson, in his "Portuguese Architecture" (A. Constable & Co., 1908), has summed up the results of such previous research and of his own study of the monuments on the spot. The above-mentioned works, supplemented by a visit of the writer to the principal places described, form the basis of these articles.

The great currents of the world's art have ever been associated with the history of dominant races or mighty movements in human thought and activity, and it is necessarily these main currents which afford the most fruitful field for study. But the art of remoter regions and minor nationalities to whom it has not been given to shake the world by force of arms or ideas need not, therefore, be neglected. An occasional trip can be profitably and pleasantly made to explore such subsidiary channels fed by the mingled filterings from mightier streams, where if the current sets with less vehemence and certainty in any given direction its very hesitations are charming. In a country like Portugal, which, in spite of its small size and population, has had no mean share in shaping the world's destinies, we may look for works not devoid of attractiveness.

Professor Carl Justi, in the historical sketch of Spanish art prefaced to Baedeker's "Guide to Spain and Portugal" (1908), says, "Sometimes it would almost seem as if all the schools of Europe had given each other a rendezvous in Spain at the expense of the Spanish purse." The remark is equally applicable to Portugal and her architecture. For the greater part of its history there is a strange lack of the distinctive marks of a national style; and, at the one period at which some such marks appear, the style in which they occur is neither thoroughly homogeneous, nor even exclusively national, since for a short period at least Spain offers here and there examples of "Manoelino" architecture, Portugal's most characteristic product, or something very analogous to it. Portuguese architecture is throughout merely one of the several provincial variants of the rather vague and composite type evolved in the whole Iberian peninsula under very varied foreign influences. Endowed with something of the Spaniard's strong decorative feeling and love of splendid architecture, the Portuguese, like them, lacked the grip necessary to make thoroughly their own what they borrowed from France, or Flanders, or Italy. They followed in the wake of the nations they imitated, often lagging as much as half a century behind them, and never assimilating their borrowings sufficiently to establish the elements of an independent evolution. Thus each new fashion abroad was in turn followed and in turn abandoned.

It would be too much to say, however, that the Portuguese showed no originality. Their copyings are not slavish, and they usually knew how to impart a flavour to their essays in foreign styles, which effectually and agreeably differentiate them from their prototypes, while in certain directions they attained results which surpass anything to be found elsewhere. This distinctive flavour is perhaps in some measure the result of the Oriental strain which, in view of their national history, was a necessary element in their civilisation. For while the young nation whose very existence was bound up with the profession of the Christian faith naturally turned to other Christian nations more advanced in culture for models of Christian architecture, and borrowed their architects to design important edifices, it was inevitable that skilled handicraft, when required in any quantity, should be supplied by the non-Christian but more highly-civilised population resident in its midst, the Moorish population which had been its master and which it was then engaged in subduing.

If the pedigree of Portuguese architecture cannot be traced like that of Italy or France in a direct line from that of Rome it is because the events which followed the break up of the Empire severed the country completely from its past. The deepest trace left by Roman rule which lasted for over four centuries is to be found in the language. If extant Roman monuments are few, they include in their so-called Temple of Diana at Evora the best-preserved Roman building in the peninsula.

The Vandals and Sueves who overran Lusitania and the adjacent provinces were not builders, and left no visible trace of their passage, and much the same accounts must be given of the Gothic rulers who followed them, though their civilisation, as manifested, for instance, by the jewellery from Toledo in the Cluny Museum in Paris, was of a relatively high order. Early in the VIIIth century the Mohammedan invasion from Morocco swept over the whole peninsula, and subdued all but its north-western mountain districts, which thus provided the starting-point of the later Christian reconquest. Meanwhile the invading "Moors," who consisted partly of Berbers and partly of Arabs, established themselves firmly in the conquered lands and practised all the arts accompanying a refined and luxurious civilisation. Although their rule extended over a period varying from one to five centuries in different parts of the country, their extant buildings anterior to the Christian reconquest are exceedingly few, two or three at the most, the best known of which is the so-called "Castello dos Mouros," on the rocky height above Cintra. This, however, is no measure of the influence of the Moors, which may be traced in several directions in Portuguese architecture even long after the final expulsion of the Moriscos, their Christianised descendants, in the XVIth century. For centuries after the reconquest, Moorish craftsmen were extensively employed and, even subsequent to their conversion to Christianity, the Moriscos retained their national traditions. Thus, while Portugal can show nothing to compare for splendour with the Alhambra of Granada, the Alcazar of Seville, or the Mosque of Cordoba, it boasts a series of buildings of some importance erected by Moors, though not for Moors, and retains some of their building methods to the present day.

By far the most important of these is the old Palace of Cintra, occupied till the recent revolution as a summer residence by Queen Maria Pia, and now maintained as a State Museum. Some sort of castle existed on the site at least as far back as the XIth century; but nothing now standing is recognisably older than the reign of John I. at the end of the XIVth. Yet there is a decidedly eastern look about this older part of the palace, which was much added to a century later by Manuel I., and it offers examples of practically all the characteristics which mark Moorish art in Portugal and which exerted an influence on the architecture of the kingdom.

The plan, as is so often the case in Oriental building, shows no attempt at order, symmetry, or parallelism. The masonry of the older walls, where the plaster has been removed for it to be examined, proves to have been of rubble strengthened at intervals in the Arab manner with lacing courses of thin bricks laid three deep. The elevations are mostly crowned by the Moorish type of battlement and pierced by Moorish windows. In the former the merlons are in steps shaped like the teeth of a saw; the latter each consist of two arches enclosed in a rectangular moulded stone frame. The arched heads, which are usually stilted and cusped, spring from slender shafts with capitals of a type familiar at the Alhambra, and abaci moulded at the sides but not on the face. Similar windows of Moorish type are found with horseshoe arches in the castle at Alvito, and a late doorway of like design, with horseshoe arches and spiral shafts, in the Chapter House of St. John the Evangelist at Evora. When there is cusping it starts at the base with a whole lobe not a half lobe as in occidental work.

At a distance the most striking feature of the old Palace of Cintra is the pair of gigantic cones which rise above its roof, recalling vaguely the oast houses of Kent, and serve the purpose of carrying off the fumes of the charcoal fires in the kitchen. Similar chimneys are still found in Morocco, and all visitors to Alcobaça will remember the remarkable XVIIth century example there, which rises from eight cast-iron columns in the centre of the kitchen of the monastery to a height of between 40 ft. and 50 ft. Unlike the chimneys of Cintra, however, it is rectangular in plan and not visible externally. This kitchen is further remarkable in being lined and paved with marble and fitted with huge marble tanks for sinks, which are fed by a clear mountain stream, running in a channel in the floor.

In examples of glazed tile linings and enriched wooden ceilings, two forms of decoration which play a large part in Portuguese architecture, and are both of Moorish introduction, the old Palace of Cintra is peculiarly rich.

The manufacture of coloured glazed tiles in

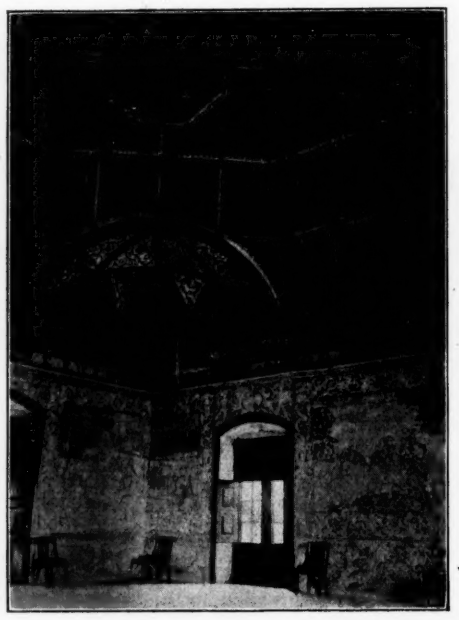


**Fig. 2. "Hall of Shields" in the Old Palace at Cintra.**

the east is almost as old as history. They were introduced into Spain by the Arabs possibly as early as the VIIIth century, but no known examples can be proved to be earlier than the XIIIth. The cool expanses of wall and floor surface which they provided, so grateful in the torrid heats of summer, as well as their decorative qualities, soon earned for them a widespread popularity in the peninsula, which they have ever since retained. The earliest form in which they appear is that of self-coloured tiles limited to four shades—bluish-green, brown, dark violet, and milky white—of various shapes and laid in geometrical patterns. Later on the invention of a process similar to that of *cloisonné* work permitted of single tiles receiving a pattern. This was impressed on the damp clay, leaving slightly raised divisions. The patterns used in mediæval times were almost exclusively geometrical, especially the star or aster pattern, dear to Arab art, but grotesque animals and floral motives were also sometimes introduced. At Cintra are several rooms decorated with mosaics of self-coloured tiles, forming high dadoes with richly cusped and crocketed crestings and patterned borders. In others the field of the dado is made of tiles with vine leaves and bunches of grapes embossed and coloured. The old cathedral at Coimbra before restoration was clothed externally with richly-patterned tiles (Fig. 1). At the Renaissance the star patterns gave place to scroll ornaments and arabesques, and the range of colour became more varied, the subjects being painted on a white ground without bounding ridges. A fine example of this kind of work is to be seen in the open ambulatory of the circular church of São Amaro at Alcantara, where large subjects are enclosed in architectural framework, in the Sacristy of Santa Cruz at Coimbra, and in the Marvilla at Santarem, where the whole walls are covered with a continuous pattern producing the effect of a rich tapestry. The use of lustre tiles, imitated from lustre ware, first light gold and later red gold, also came into vogue in the XVIth century. After the expulsion of the Moors the art of the tile-maker gradually declined. The colours lost in brilliancy, and their range became restricted, till a white ground with designs in blue, varied occasionally by yellows and purples, came to be the almost exclusive treatment.

This blue and white technique, which appears to have arisen almost simultaneously at Delft, was in each case the outcome of a desire to imitate Chinese porcelain, then becoming known in Europe. The use of large bordered panels, to complete which a large number of tiles might be required, came in in the XVIth century, and continued in use till the early XIXth, having reached its zenith in the XVIIIth. Innumerable examples of this system of decoration are to be found throughout the country. The cloisters of the Cathedral of Oporto afford an instance. Here the walls are decorated with a series of panels illustrating, in the lower story, the Song of Songs, and, in the upper, hunting, fishing, and other sports. Another is to be found in the Chapel of our Lady of the Desert in the monastery at Alcobaça, where the scenes are drawn from the Apocalypse. Side by side with these tiles, with a single design on each, a flower, a vase, or a figure scene similar to contemporary Dutch work, are commonly used, as, for instance, on the cloister staircase of Santa Cruz at Coimbra.

The modern use of tiles for covering entire façades does not date back beyond the XIXth century. Previously they were used for the walls of rooms, cloisters, and loggias, for dadoes, for the risers and treads of stairs. In gardens they served to line stone seats and the sides of tanks and fountains, as in the charming Quinta de Santa Cruz at Coimbra, and formerly in the cloister at Belem, which was laid out in the XVth century in a stellar plan, with a tiled tank dotted with islands connected up by bridges. One other external use was found for them in early times in the covering of domes and conical roofs. Thus the great chimneys at Cintra were once, and the dome of the Sé Velha at Coimbra and the spire at Evora are still, covered with green and white tiles laid in patterns.

The decorative joinery of the Moorish workmen, especially as applied to roofs and ceilings, likewise had a lasting influence on Portuguese architecture. It was their custom to enrich their roofs by means of strips of wood used ornamentally, either fixed so as to intersect diagonally between the pairs of coupled ties and

**Fig. 3. Degrees Hall of the University of Coimbra.**

rafters, which they affected in their roof trusses, as in the Romanesque Church at Aguas Santas, near Oporto, or between the ordinary rafters, as at Caminha; or, again, on the face of the boarding in geometrical patterns, as in the palace chapel at Cintra. These roofs were further richly coloured. The deeply-moulded panelled roofs of barrel or domed form to be seen in many parts of the country seem to be their descendants. One of the finest is that of the Hall of Shields at Cintra, where a square apartment is covered by an octagonal timber dome, with its diagonal sides carried on semi-circular ribbed vaults or semi-domes (Fig. 2). The latter alone survive from the XVIth century work, the upper part having been remade in the XVIIth. The whole is elaborately coloured and gilded, and the arms of the King and nobles and many other devices are introduced in the panels. The Swan and Magpie Halls at Cintra likewise have painted panelled ceilings, the former five-sided the latter three-sided, with the slopes in each case returned at the ends. At Coimbra the Hall of the University is also a five-sided barrel with square panels painted alternately blue and red (Fig. 3), and at Oporto the above-mentioned cloisters have a richly-moulded but unpainted barrel roof with panels of various geometrical forms.

## THE ENGLISH HOUSE FROM THE NORMANS TO THE TUDORS.

On the 22nd ult. Mr. W. H. St. John Hope, M.A., read a paper at Carpenters' Hall, London-wall, on this subject, and showed 121 lantern slides in illustration of his remarks:—

"In addressing you to-night on the English house from the Normans to the Tudors I propose to illustrate by plans and pictures the gradual changes that evolved from the common hall such a dwelling as can be lived in with comfort to-day.

The first step in the history of a building is the planning of it. Most people now seem to be governed as to their choice of a house by its appearance, on paper or otherwise; but our forefathers thought only of its plan and arrangement. Old building contracts accordingly lay stress solely on the plan and dimensions, while the style and elevations are not so much as hinted at, but left entirely in the hands of the master carpenter or freemason.

### Houses at the Time of the Norman Conquest.

It will be convenient as a beginning to inquire what sort of houses existed in England at the time of the Norman Conquest. Probably not a single example is now standing, but a certain amount of information can be gleaned from documents.

It is evident from the Great Survey known as Domesday Book, which was finished in 1086, that in the XIth century the country houses consisted of (1) the humbler dwellings of the cottars, bordars, or villagers; and (2) of the more important farmsteads and manor houses of the English thanes and their Norman successors.

Of the actual nature of the former nothing definite is known, and it can only be assumed that they were of a character similar to, and of the same perishable nature as, many a labourer's cottage of to-day.

The dwellings of the chiefs and owners of property, on the other hand, were clearly large and lofty halls, and their sites not improbably may be the moated enclosures that are still so common in many parts of England.

For more details of such houses than are furnished by the Great Survey we may pass on to the forms of agreement by which certain manors in Hertfordshire and Essex belonging to the Canons of St. Paul's were let to farm during the XIIth century. These not only give full particulars of the manors themselves, and of the stock and farming implements, but notices of all the buildings, and sometimes their dimensions. These buildings, moreover, were not new, and there is no reason why many of them should not have been much older than the Norman Conquest. I have only time to refer to a few.

At Ardleigh, in 1141, there were two manors. In one were three granges, or barns, and the domestic buildings comprised a good hall and chamber, a tressaunt, an appendage to the hall towards the south, a privy adjoining the chamber, and another in the court, a good granary, a kitchen, a hay house, and a stable.

The other manor also contained a hall, with a chamber next to it, a kitchen, a stable, a bakehouse, and a house for the servants. In the hall were a dormant table, a buffet, and two movable benches.

At Belchamp the house was within a little gate. In 1152 the manor house at Kensworth (Herts) consisted of a *hatla* or hall, a *thalamus* or great chamber, and the *domus* or house-self, which was betwixt the hall and the great chamber. The three sections were, therefore, in line. The hall measured 35 ft. by 30 ft., and was 11 ft. high to the roof beams, and the same above. The "house," or parlour (as we should call it), was 12 ft. by 17 ft., with a height of 10 ft. below the beams and 7 ft. above. The chamber measured 22 ft. by 16 ft., and was 9 ft. high below the beams, and the same above. The length of the house was, therefore, about 73 ft. Since the span of the hall, 30 ft., is rather wide for ordinary tie beams, it perhaps consisted of a hall proper of the same width (17 ft.) as the house part, lighted by windows in the gables, and with aisles about 5½ ft. broad, divided off by a row of posts on each side. The whole of the buildings were probably of wood and roofed with shingles. The remains of such a wooden hall, though of late XIIIth century date, exist at Tiptofts, in Essex, and part of the Norman wooden arcade of the great hall of the Bishop of Winchester may still be seen in his castle of Farnham.

Another bit of documentary evidence may be found in the so-called Boldon Book. This is a survey made in 1183 of the then revenues of the Bishoprick of Durham and the assized rent and customs then and formerly due. In the vill of Boldon twenty-two villans were bound to set up for their lord the Bishop, "if there shall be need," a house 40 ft. long and 15 ft. wide; the thirty-five villans in Whickham were similarly holden. In Aucklandshire all the sixty-six villans were bound, on the occasion of the great hunts, to make the Bishop's hall in the forest, with a buttery and pantry, a chamber and privy, and a chapel. The hall was to be 60 ft. long and 16 ft. wide within the posts, which shows that it was of wood, and the chapel 40 ft. long by 15 ft. wide. The twenty villans of Stanhope were responsible for the appendages to this hall, namely, the kitchen, the larder, and a kennel, and they had also to find litter in hall, chapel, and chamber. The chamber was, no doubt, the Bishop's own room, but the hall would serve, as was then usual, not only for meals, but as the dormitory of the servants and attendants.

Here, again, we have a description of buildings "that formerly had been" probably from the foundation of the bishoprick itself.

Our examples of these early houses are not many, and have survived through their being built of masonry instead of wood. For the introduction of stone construction in domestic architecture we have to thank the Normans, who were the first to realise that the methods already used in building stone churches could equally well be applied to their houses and castles; buildings in masonry, moreover, had the advantage of being less liable to destruction by fire.

### Houses of the Hall Type.

A comparative examination of the surviving XIIth-century houses shows that they may be divided into two classes: (1) those that carry on the tradition of the common hall; and (2) dwellings of another type, of two stories.

Houses of the hall type are to be sought among the infirmary buildings of the monasteries where the common life prevailed, or in the manors and castles of the great feudal lords, where they served as before as a lodging for the servants and retainers.

The great hall of Chepstow Castle is the earliest that can be dated, since it is almost certainly the work of William FitzOsbern, before 1072. Later changes, by which it was converted into a cellar to a new hall above, have done much to obscure its arrangements, but it still retains its original doorway, of almost Roman design and character, and a number of small windows towards the bailey.

The finer and less altered hall of Richmond Castle is not much later in date. It stands over a cellar, and, owing to its position on top of a cliff, was lighted on both sides by curious two-light windows.

The monastic infirmary was not only the hospital for the sick, but the lodging of the infirm and elderly monks; it was also the temporary abode of the monks who had undergone the periodical blood-letting. For the housing of these several companies an establishment of some size was needed in a large abbey. This took the form, in the XIth century, of a pillared hall, the body or nave of which served for meals and for exercise in bad weather, and the aisles to hold the beds. The infirmary also included a kitchen and a chapel, etc.

At Christchurch, Canterbury, the early XIIth-century infirmary hall was of seven bays and 150 ft. long, with a large chapel at the upper end. At Ely the hall, which was built about 1165, is of nine bays, but only 105 ft. long, with a chapel on the east, as at Canterbury. The infirmary halls at Norwich and Dover Priory had one aisle only.

The best known of the manorial halls is that of the King's Manor at Oakham, in Rutland. It was built of stone, about 1180, in place probably of the earlier hall mentioned in the Great Survey. It is 65 ft. long, and divided by stone pillars with carved capitals into a nave and aisles. The kitchens and other offices have perished, perhaps because they were only of half-timbered construction.

Bishop Pudsey's great hall at Auckland is of the same date and type as Oakham, but later changes have effaced its original condition.

At Appleton, Berks, is a moated manor house which retains the doorway and other features of a handsome little hall, *circa* 1190. It was a simple oblong in plan, but has been subdivided and turned into a two-storied house.

There is a remnant of another interesting example at Warnford, Hants. The hall is 52½ ft. long by 48½ ft. wide, and had four very tall stone pillars to support the roof. At one end was the chamber, over a cellar and offices.

But the finest Norman hall must have been the great structure added to the royal palace of Edward the Confessor at Westminster by William Rufus. It was 238 ft. long, with a span of 67 ft., and was apparently subdivided by two rows of mighty wooden pillars, about 40 ft. high, to carry the roofs, for each of the three divisions had its own. The hall was of twelve bays, and lighted from each side by a row of large windows set at intervals in an ornamental wall arcade, as well as from the ends. This new hall at Westminster was used for the first time in 1099, and when some of those present criticised its inordinate size the King said it was not half big enough, and but a mere chamber to the palace which he would build.

Probably not many of you are aware that the outer walls of the present Westminster Hall are, in the main, those of William Rufus.

Of the kitchens attached to these Norman halls very few have survived. Those at Canterbury and Dover have lost the old arrangements, and the kitchen at Fountains Abbey is one of the few that retains them. It had two chimneys in the middle, back to back, and was vaulted throughout. That at Kirkstall Abbey closely resembled it, and both were so contrived as to serve two dining-halls, between which they were built. A good deal of cooking was, no doubt, done in the open air, after the manner so vividly depicted in that quaint piece of Norman stitchwork miscalled the Bayeux Tapestry.

### The Two-Storied Type of House.

The two-storied type of house was square or oblong in plan. Its low basement served as a cellar, and perhaps in part as a kitchen, and the upper story formed the solar or living-room, which was reached by an external staircase. Such a house is depicted in the Bayeux Stitchwork, and shows us how the inmates were occupied. The staircase was usually wooden, but there is a beautiful example in stone at Christchurch, Canterbury, which led up to the old tramps' lodging adjoining the monastery gatehouse. Houses for the accommodation of guests were among the buildings of every monastery. Two, of a date about 1150, are still standing at Fountains Abbey. Each formed a two-storied house, with living-rooms on both floors, the lower being a lofty vaulted basement.

Another good instance of a Norman house, *circa* 1160 or so, though now ruined, exists within the precincts of Christchurch Castle, Hants. It is built of slabs of Purbeck marble with stone dressings, and has a basement 76½ ft. long and 24 ft. wide, which formed the cellar, etc., and an upper floor with a chimney, and large two-light windows. At one angle was a small room built out over the mill beat, and at the other end of the house was a vice down to the cellar. The upper room was, perhaps, subdivided, and reached by an outside stair at the opposite corner.

Another but fortunately complete example of about the same date is at Boothby Pagnell,

Lincs. It consists of a vaulted basement in two sections, one of which probably served as the kitchen, and an upper story reached by an outside stair. The doorway opens into the screens, beyond which is the hall or solar, with a fine hooded chimney and a smaller chamber. The screens are now largely occupied by a staircase to an upper floor, of Tudor date, formed within the roof.

### XIIIth-Century Houses.

The scarcity of XIIIth-century stone houses, as compared with those of the Norman period, suggests that the majority of the manor houses continued, as before, to be built of wood; but so little is known of them that nothing can be deduced as to their size or plan. The stone buildings are still divisible into halls and houses, but the latter now exhibit new types of an interesting character.

The monasteries again provide examples of the common hall. At Waverley Abbey, Surrey, the infirmary hall, built in 1201, had one aisle only, shut off from the nave by a row of round wooden pillars, which were afterwards cased with masonry. The infirmary hall at Kirkstall Abbey, of a date *circa* 1230, also had at first only one aisle, shut off by a line of wooden posts, but about 1300 it was remodelled and furnished with two narrower aisles with stone arcades.

At Tiptofts Manor House, Essex, is a rare instance of the remains of a late XIIIth-century hall of carpentry work, which helps to illustrate the Waverley and Kirkstall examples. At Fountains Abbey the plan remains of a notable infirmary hall, built all of stone by Abbot John of Kent, between 1220 and 1247. The hall was 170 ft. long and 70 ft. wide, and had to the east a chapel attached to a great chamber, or lodging for the visiting abbot, with a large kitchen, etc., adjoining. Remains of like halls may be seen at Gloucester and Peterborough. Monastic infirmaries were not, however, always of this character. That at Jervaulx has a hall of quite the domestic type, built over a sub-vault and reached by an outside staircase, and includes a chapel and other chambers. The kitchen of it stood a little distance away on the opposite side of a court.

The fine hall of Winchester Castle is contemporary with the Fountains example, but differs from it in plan, which is like that of the nave and aisles of a church. It is 111 ft. long, and of five bays, with arcades carried by marble pillars. The windows are transomed and of two lights with side seats. The hall was built by King Henry III. between 1222 and 1232, but the roof was renewed *temp.* Edward IV. The kitchens, etc., which were added in 1234 have been destroyed.

Of the same date and character was the great hall added to the palace at Lincoln by Bishop Hugh of Wells (1209-35). It was 85 ft. long and of four bays, with arcades carried by marble pillars. The doorway into the screens was covered by a two-storied porch, and at the same end were the buttery and pantry and a way to the kitchen, with chambers over. Beyond, over a bridge, was the kitchen itself, built, owing to the fall of the ground, upon a lofty range of cellars. At the opposite end the hall was attached to the older palace of St. Hugh.

A similar addition was made to the palace at Wells by Bishop Robert of Burnell (1275-93). This great hall was 115 ft. long and 60 ft. wide, or a little larger than that at Winchester, and of five bays, with aisles divided off by wooden pillars that helped to carry the roof. At the west end was a porch and a great chamber, etc., above the buttery and pantry, as at Lincoln. The kitchen was beyond, but has been destroyed, and of the hall, etc. only enough is left to show its design and general arrangement. It had lofty windows of two lights with transoms.

Another notable work of Bishop Robert was the large house at Acton Burnell, for which he had a licence to crenellate in 1284. It forms an oblong 95 ft. by 60 ft., with a square tower at each corner, and was divided longitudinally within into two sections. The northern half contained, above a range of cellars, the great hall, with a room over the screens, and the southern half the great and other chambers, raised apparently over the kitchen and offices. For its date the plan of this Acton Burnell house is unique.

Several quite small houses remain to us which had as the principal room a hall upon the ground floor. At Coggs, in Oxfordshire, the remains of such a hall, with beautiful windows, somewhat of the Winchester type, are incorporated in more modern work. A fair-sized house at Charney Bassett, fortunately complete, has upon the ground floor a hall, which has been modernised, with a projecting wing at each end. One contained the kitchen, with chambers over; the other the cellars, with a solar and chapel above, reached by an outside stair.

At Longthorpe, Northants, are the remains of another house with a hall on the ground floor, having attached to one corner a massive squat tower, containing three stories of chambers.

The fine and perfect house known as Stokesay Castle, in Shropshire, is also an example with an appendent tower. It stands on one side of a moated enclosure, entered through a picturesque Jacobean gatehouse. The main division is a great hall on the ground level, of four bays, with open roof and dormered windows. At the north end is a three-storied tower, with cellar basement, and two living-rooms above, reached by a wooden step-ladder from the hall, and provided with chimneys and garderobes. To the south, in line with the hall, is the great chamber, reached by an outside stair and furnished with a large chimney, now enriched, as are the walls, with Jacobean wainscoting. Beneath it is a cellar on the ground level, with another below. Beyond the solar, and connected with it by a small gallery containing the garderobes, is a tall and massive tower of three stories, with living-rooms on each floor. The kitchen, which was semi-detached to the north-east of the hall, has disappeared. The date of this extremely interesting house, for it is nothing more, can approximately be fixed by the licence to crenellate, or fortify it, granted in 1291.

There are many XIIIth-century houses in which the principal rooms occupy the first and not the ground floor. In the larger houses of this class the chief room was still a hall, as in the infirmary of Jervaulx Abbey. In association with this example, since they are practically of the same type, may be mentioned the residences of the bishops and dignified clergy, unmarried men who were given to hospitality and maintained an establishment of some size; they thus kept up to some extent the old idea of the common hall.

Lanfranc's palace at Canterbury was one of the earliest, and another, also of the XIth century, was built by Bishop Gundulf at Rochester; but neither has survived. The Archbishop's palace at Lambeth dates from 1197, and the existing chapel, with its fine sub-vault, must have been begun soon after, but the great hall has been rebuilt.

The palace at Salisbury still contains within it the original house of Bishop Richard Poore, built in 1220 and 1221. It consisted of a hall, a chamber, and a chapel, raised upon a vaulted substructure, which was perhaps the servants' department, with a kitchen and offices projecting at right angles from one end. Access to the hall was probably by an external stair.

The first palace at Lincoln was begun soon after the translation of the see from Dorchester in the XIIth century, but has disappeared. The great St. Hugh (1185-1200) is said to have begun the "new palace," considerable remains of which exist. It seems to have had a hall and a great chamber raised above a series of vaulted cellars and servants' quarters, with a bedchamber, etc., to the south, and the chapel, etc., at the north end. I have already described the great hall added to it by another Bishop Hugh.

The bishop's palace at Wells is, happily, almost intact. It was begun shortly after 1220 by Bishop Joscelin, brother of the builder of the added hall at Lincoln, and consisted originally of a hall 68 ft. long, with a great chamber at one end, and another opening out of it. These were overlapped by a gallery which communicated with the kitchen (probably) at one end and the chapel at the other. The chief rooms were raised upon a vaulted basement, and reached by vices at the ends of the gallery. The chapel was reconstructed during the last quarter of the XIIIth century by the same Bishop Robert who added the great hall.

### The Minor XIIIth-Century Houses.

Of the minor XIIIth-century houses one of the earliest and most curious is the abbot's lodging at Kirkstall Abbey. It is three stories high, and though but a floorless and roofless ruin is fairly complete throughout. The basement seems to have been the servants' department. The main floor was the abbot's hall or solar, a comfortable room with a wide chimney; and the second floor, which also has a chimney, probably served as his bedroom. The two upper floors were reached by a wide staircase within the house. At the west end were the garderobes, and on the east a large chapel upon a vaulted sub-vault, in which was the kitchen. The original windows were of two pointed lights divided by a pillar and rebated for shutters or glazed casements.

The house of the Master of St. John's Hospital, at Northampton, of a date *circa* 1250, though much altered, seems to have included a hall, a chamber, and garderobe, all on the upper floor, with offices beneath.

The parsonage at West Dean, Sussex, is also an example, *circa* 1260, of a small XIIIth-century house. It has a ground story lighted by small windows, and an upper floor gained by a vice at one corner, with windows of two cusped lights.

Another Sussex parsonage, at West Tarring, has a XVth-century hall attached to a two-storied late XIIIth-century block, with solar upstairs reached by an outside stair.

At Millichope, near Ludlow, is another small house of simple plan of late XIIIth-century work. It consists of a vaulted basement, which formed a cellar and kitchen, with a wooden stair to the upper floor, which has two nice original windows with pillar mullions and side seats. It only measures 33 ft. by 21 ft.

At Tollard Royal there is a small and complete house, quite early in the century, consisting, like that at Millichope, of an oblong basement, with an upper chamber, or solar, reached by an outside stair, but having at one corner an oblong tower with small rooms on each floor.

At Crowhurst, Sussex, are, or were, the ruins of another small house, consisting of a solar over a vaulted basement, with a tower-like porch at one corner, which served as a vestibule to an outside stair, with a chapel or chamber above.

The charming example of this type at Little Wenham, in Suffolk, is likewise noteworthy for its perfect condition. It consists of a vaulted basement, which formed the cellar, with a hall-like solar above, reached by an outside stair. Attached to the opposite angle is a square tower, with an appendent stair-turret or vice, having upon the first floor a chapel, with shuttered window-openings toward the solar and a low-side window on the north. Above the chapel is a bedchamber, reached by the vice, which also descends to the basement.

At Aydon, in Northumberland, is another perfect XIIIth-century house. It is of two stories, having a cellar with kitchen over at the west end, then the hall (which is reached by an outside stair) over a minor hall for the servants, and a transverse wing at the east end, with the servants' kitchen, etc., below and a long solar upstairs. The house stands on one side of a court, and licence to crenellate, or fortify it, was granted in 1305, but the buildings seem to be some twenty years or more earlier.

### Use of Brick in Building.

Before leaving the XIIIth century a few words must be said as to the early use of brick in building. Though known to and freely used by the Romans, bricks seem to have been neglected or forgotten as a building material till well on in the Norman period. The fine and late Norman church at Grimsby has a relieving arch of undoubted contemporary bricks over the west door, and the late XIIth-century gatehouse chapel of Coggeshall Abbey, Essex, is not only brick-faced throughout, but has details in moulded brick. Bricks moulded to build arched window heads are also found in early XIIIth-century work in Allington Castle, Kent. At Watton Church, in Holderness, an early XIIIth-century chancel is largely faced with brick, and the Little Wenham house also exhibits original brickwork. At the beginning of the XIVth century the Corporation of Kingston-upon-Hull was running a brickyard as a commercial speculation, and the large Church of the Holy Trinity there, of a date *circa* 1315-20, is faced throughout with what are doubtless local bricks. Later examples, of course, abound, especially in districts where stone was obtainable only with difficulty and at some cost."

[The remainder of Mr. St. John Hope's paper will be given in our next issue.]

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THE LONDON OPERA HOUSE.

The second article on the London Opera House promised for this week is unavoidably held over until next week.

## HISTORICAL NOTES.

**Protection of Historic Buildings.**

IN the House of Commons last week Mr. King asked the Prime Minister whether he was aware that France and other countries scheduled their ancient buildings and other historic monuments with the object of protecting them as national heirlooms and securing them against vandalism or destruction; and whether he could promise legislation with a similar object to protect such historic buildings as the Reindeer Hotel, Banbury, now threatened with partial demolition. Mr. Asquith, in reply, said: "I am aware of the procedure in France referred to by the hon. member. The First Commissioner of His Majesty's Office of Works proposes to introduce at an early date a Bill dealing with the question of the preservation of ancient monuments and buildings, but pending its introduction I can make no statement with regard to its provisions, nor as to whether the Reindeer Inn at Banbury will fall within its scope."

**Professor Cockerell, R.A.**

A RECENT issue of the *Journal* of the Royal Institute of British Architects contained an essay by Mr. Ernest Prestwich on the life and work of Professor C. R. Cockerell, R.A., one of whose early works was the Hanover Chapel in Regent-street, demolished a few years ago. Of this building we are able to give an illustration, and, in connexion with it, the following reference may be quoted from Mrs. Russell Barrington's "Essays on the Purpose of Art," a book full of appreciative opinions on modern art.

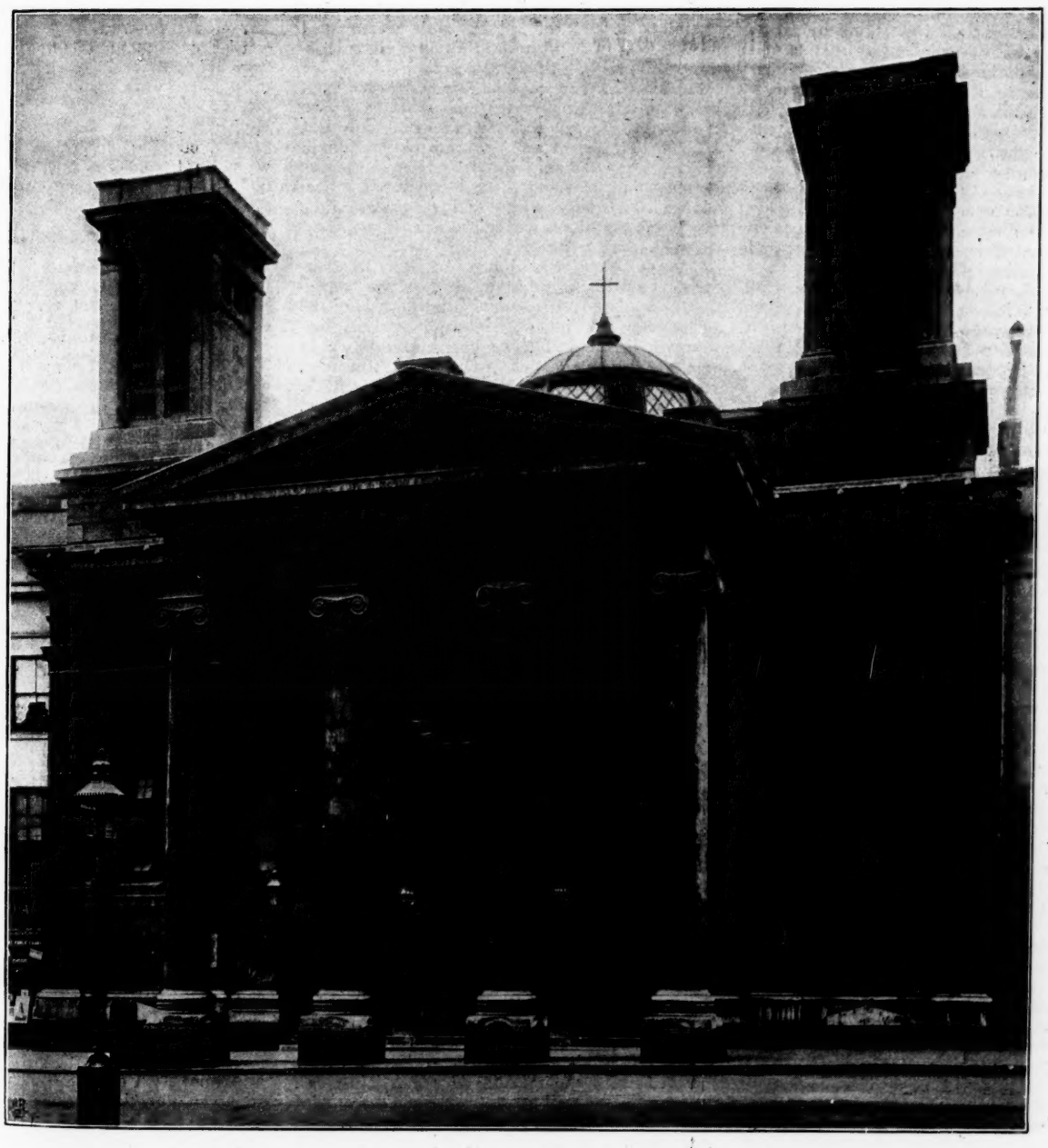
"How do we, in this conceited age of ours, treat those benefits which come down to us from past ages?" asks Mrs. Barrington. "How did we treat a beautiful church built in a quite recent generation by a true artist, a master of Renaissance architecture, whose grave is to be found among the greatest of England's children in the Crypt of St. Paul's Cathedral, Professor Cockerell? It had not existed half a century when we pulled it down. Why? To widen the pavement in Regent-street so that the shopping-loving people in this much-frequented thoroughfare should not for a moment be impeded in their important quest."

**The Old Chapter Library at Windsor.**

SOME interesting discoveries have just been made in the old Chapter Library of St. George's Chapel, Windsor Castle. Over the whole length of the roof of the western walk of the Dean's Cloisters at St. George's Chapel was situate in former days the ancient library of the Dean and Canons of the chapel. In 1662 the library was transferred to its present quarters overlooking Thames-street. Of the space occupied by the old library the larger portion is now the Chapter Room and the smaller portion the office of the Chapter Clerk. The external architecture, the window tracery, and the interior of the present Chapter Room are comparatively modern. Recently, on the appointment of Mr. F. W. H. Deane as Chapter Clerk, the old office was repaired. The ceiling had, up to then, appeared to be only of lath and plaster whitewashed; but after removal of the whitewash and several coats of paint, it was found by Mr. A. Y. Nutt, resident Architect at the Castle, to consist of panels of very fine oak work with bosses of delicate and elaborate carving. These were each and all carefully taken down, cleaned, photographed, and eventually replaced. The centre boss represents a chalice, between the initials "T. B.," reposing on an altar slab of which the five crosses are still visible. The consecrated wafer above the chalice has, however, been chiselled off. Another discovery has been that of a beautiful wooden window with an oaken frame of ten lights, which was found embedded in the wall at the north-east corner. This would have originally looked over the north wall of the Cloisters towards the Deanery. No doubt the whole of the eastern side of the old library was furnished with a series of similar windows.—*The Times.*

**Clifton Campville Church.**

MR. W. H. QUARRELL writes to *Notes and Queries* as follows:—"The fine church of Clifton Campville, Staffordshire (near Tamworth), has just been saved from ruin—at a cost of about 3,000*l.*—an expenditure of 500*l.* or so being still needed to preserve the ancient windows and to complete the tower. This magnificent building has for many years been in a deplorable state. The XIIIth-century masonry and buttresses in the north wall and the southern pillars have been fully repaired where necessary, and the roof has been put back to its original place. Considerable fresco-work has been discovered, evidently that noted by Shaw, but it is very indistinct. The chantry chapel has been restored, and is now no longer screened off from the church, while the fine roof is once more revealed. The southern aisle, called the Haunton aisle, has been extensively repaired, this being necessitated by the bad state of the stone; and the removal of the poor plaster-work has shown the best features of the structure, and with these an interesting fresco, apparently depicting the founder, Sir Richard Stafford, who built the church about 1353."



**Hanover Chapel, Regent-street, now demolished. Professor C. R. Cockerell, R.A., Architect.**

By Permission of the Royal Institute of British Architects.

# THE BUILDING TRADE.

## MANCHESTER BUILDING TRADES EXHIBITION.

THE Building Exhibition organised by Messrs. H. G. and H. C. Montgomery has been opened at the Exhibition Hall, Rusholme. The building at Rusholme represents a city in miniature, replete with all that is up to date in building construction, decoration, and internal fittings. Mr. Montgomery has certainly eclipsed himself at Rusholme. The Hall is an immense one, allowing plenty of scope for broad and effective treatment. The exhibitors' stands, many of which are of elaborate and costly structure, are suitably grouped in the central parts of the Hall. Across the top end of the Hall stretches a picturesque and ornamental garden, which extends halfway down each side of the Hall. This is laid out, and a pergola and other features add to its attractiveness and charm. The combination at Rusholme of placing the exhibits in a setting of Nature's surroundings was a happy inspiration, and has resulted in a most pleasing and successful display. It is unfortunate that the Exhibition should have been held at the present time, and whilst the country is in such an unsettled state, and doubtless business prospects will suffer. Mr. Montgomery appears to have spared no expense in making it a success as a high-class exhibition.

Messrs. Hayward Brothers & Eckstein, Ltd., 187 to 201, Union-street, Borough, London, S.E., have a stand at No. 24D 40 ft. long by 10 ft. wide, and have built a small office at one end of it, in which they have incorporated a number of things, such as their prismatic pavement lights, tiled lights, opening flaps, reflecting stallboards, "Copperlite" stallboards, patent puttyless roof glazing, steel sashes, and casements, and some examples of "Prior" glass—a rich, coloured type of leaded glazing. The firm had the order for the stained glass windows for the Westminster Abbey Coronation Annexe at the time of the Coronation of His Majesty King George V.; and they supplied this glazing, as they have on several occasions, for Windsor Castle. At the other end of the stand the firm have erected on columns a full-size steel puttyless glazed lantern skylight, showing all points of construction of Hayward's "Reform" system, giving the maximum strength, simplicity, and lightness. Around the stand are a series of numerous types of Hayward's patent collapsible gates, showing lift fronts, shop gates, and a large strong H section type for public courtyards, etc. There are numerous other examples, such as ventilators, Sheringhams, mica flaps, "Alliance" roof vents, a plastered panel of Hayward's "Jhilmil" steel lathing for fireproof work, and fire-resisting "Copperlite" glazing, and iron spiral staircases, etc.

The Kleine Patent Fire-Resisting Flooring Syndicate, Ltd., exhibit floors, staircases, and roofs constructed of reinforced hollow bricks. The framework of the structure consists of steel stanchions and horizontal steel joists covering a ground area of 20 ft. by 10 ft. The floor of the exhibit is raised about 3 ft. from the floor level of hall in order to permit of two short flights of stairs being constructed on the Kleine System to lead up to same. This floor is constructed of small size hollow bricks set on edge and reinforced with flat tension bands to form a floor 6 in. deep spanning 10 ft. and built into the webs of girders on either side, only the ends not requiring a support. Above this is constructed a 20-ft. span, 7¼ in. thick, built with Kleine patent hollow bricks with closed ends reinforced with round rods and cantilevering slightly beyond the steel frame. A small opening has been left in the middle of this span without trimming joists to demonstrate the fact that openings may be left if desired. On top of this 20-ft. span are built Kleine hollow brick reinforced walls. The 20-ft. span has been built on top of the girders to demonstrate that there is no arch action in the Kleine floors, and consequently there is no thrust on the steelwork. The advantages of the Kleine system are briefly:—Absolute fire resistance, high sound-proof qualities, lightest weight of any floor, no thrust on walls or steelwork, no cracks in plaster of ceilings, can be constructed for any span and for any load required.

The stand of Messrs. Machin & Koenig, Hare-court, 62, Aldersgate-street, London, E.C., shows their Compoboard, which is used for the lining of ceilings and walls, their fireproof asbestos slabs for the same purpose; also their asbestos tiles for roofs. The firm are making a special effort to bring before the public a large variety of hardwood panels for the construction of ceilings, dadoes, walls, etc. These panels are made of plywood in superior woods like oak, mahogany, ash, silvery birch, and satin birch. These woods are shown either framed as dadoes or ceilings in position, or they are shown in large sheets not fixed.

Messrs. R. Waygood & Co., Ltd., makers of lifts and cranes, Falmouth-road, London, S.E., are showing the lift machine only of one of their electric passenger lifts, and the machine only of their small electric service lifts. In addition they have on exhibit a model of Waygood automatic electric passenger lift and a model of a hand-power service lift, as well as lift accessories in the way of blocks, etc.

The leading features of the exhibit of Messrs. S. & E. Collier, Ltd., Grovelands, Reading, are their old-fashioned roofing tiles and reproductions of hand-made brick in various thicknesses, textures, and colours, together with the well-known Reading silver-grey bricks and red rubbers; also similar texture roofing tiles with varied tints and colours. The other exhibits consist of plain and ornamental roofing tiles in smooth-faced quality, ridge tiles, moulded bricks, terra-cotta hollow blocks for bungalows and cheap buildings, breeze and partition blocks, tiles for curing damp walls, small tiles for porches, old-fashioned pan and Italian tiles, hand-made paving squares, Roman tile slips for doors, window arches, fireplaces and key blocks, hand-made briquettes for fireplaces, air bricks, white and grey sand lime bricks, dovetail breeze bricks for floors, and Silchester art pottery.

Messrs. Frederick Jones & Co., Duncan-street, Salford, Manchester, etc., are the manufacturers of the "Hercules" fireproof partition blocks for all kinds of internal partitioning, and at their stand these goods are shown in the various stages of fixing and finishing, giving a very good idea of their strength, stability, and suitability for this class of work. The goods can be supplied in plaster-concrete, portland-concrete, pumic-concrete, or in the plaster quality with a smooth face on both sides requiring the finishing coat. In addition, their exhibition shows their fibrous plaster ceiling slabs fixed and finished, showing how these goods can be applied cheaply and quickly to ceilings or partitions. The firm are well known as manufacturers of British-made slag wool (silicate cotton), non-conducting material, which is also fire, sound, and heat proof. Samples of this material in the loose state, and also made up into handy forms for pipe, boiler, cylinder covering purposes can be seen and obtained at their stand.

The Saxon Portland Cement Company, Ltd., Cambridge, show the raw material as taken from the quarry, after drying, ground marl ready for burning, raw material ready for kilns, sample of finished Saxon cement, etc. The raw material is a mixed "chalk-marl," consisting of a combined chalk and clay deposit, containing from 15 per cent. to 25 per cent. of clayey matter, and an average of about 79 per cent. of carbonate of lime. As the raw materials in the quarries vary considerably in the proportion of carbonate of lime at different points the moisture is first driven out of the material as quarried to enable it to be ground to an impalpable "flour," so that it can be combined to the correct chemical porportions in special mixers, whose contents are constantly being analysed by the works chemists. This is to ensure the absolute uniformity of the mixture before it is allowed to pass to the next stage of manufacture. The ground marl after leaving the mixers is pressed into blocks for convenience of loading into the kilns. In the case of the rotary kiln the "flour" is conveyed to the kilns for burning. The finished cement is a finely-ground powder, consisting of about 60 per cent. of absolute "flour," and the whole of it is of an average fineness as to leave only 1 per cent. on a sieve having 5,800 holes per square inch. This fineness of grinding is important, as the finer a cement is ground the greater is its cementitious value or power of cementing together particles of sand and aggregate, or other materials having no cohesive power in themselves. The tensile strains developed by Saxon cement after seven days are therefore high, and a minimum of 600 lb. per square inch is guaranteed with every ton sent out from the works. Its expansion under the Chatelier test is only 1·5 millimetres, as compared with the 6 millimetres allowed in the British Standard Specification, and in the boiling test it is thoroughly sound. All Saxon cement is guaranteed to pass the British Standard Specification.

Messrs. G. Jackson & Sons, Ltd., of 49, Rathbone-place, London, W., and Mr. G. P. Bankart, of Baldwin's-gardens, Gray's Inn-road, London, E.C., are jointly exhibiting various interesting examples of modelled plasterwork, also leadwork and stucco work. The exhibit also shows a Georgian treatment for a roomside with panels and door dressings, and likewise an Adam treatment with pilasters and plaque, ornament, etc.

Messrs. John P. White & Sons, Ltd., the Pyghtle Works, Bedford, and New Bond-street, W., are showing oak panelling and their special hospital teak-faced doors at their own stand. In addition to this, they fitted up for Mr. Montgomery a large portion of the hall, consisting of about 20,000 super. ft., as a garden, treated with trelliswork pergolas, in which people may walk about or sit down and rest.

The exhibit of the Gypsum Mines, Ltd., Kingston-on-Soar, Derby, and Robertsbridge, Sussex, consists of Sirapite finished in various ways on brickwork, lathwork, metal lathing, polished Sirapite, Sirapite with a stucco finish, also plasters and Keene's cement.

The stand of Messrs. Thos. Parsons & Sons, varnish and japan manufacturers, Endell-street, Long Acre, London, W. C., is the same as the one they showed at the Olympia Building Trades Exhibition last year—that is, the white enamelled "Battleship." The stand space occupies 600 sq. ft. in a prominent position. The stand has not been re-enamelled since the exhibition at Olympia last year, and has been continuously on view, chiefly at the Crystal Palace, ever since that time. The firm are also making an exhibit of sample panels finished with "Endelflat" and "Lacreite" enamels; and other materials which they are bringing to the notice of visitors are "Opako" lead-free undercoating, "Mosaico" metallic paints, and their new "Trans-ol" friezes. The latter are transfers executed in oil colours, and are, therefore, both washable and permanent.

At Stand No. 57, Row F, "Ronuk," Ltd., have a stand built entirely of oak. The entire surface of the wood has been prepared and polished with "Ronuk," and shows the result of the "Ronuk" method of treating interior woodwork. The firm are contractors for the first preparation and polishing of all kinds of flooring and panelling.

Messrs. Hammond & Champness, Ltd., Alfreton-street, Old Kent-road, London, S.E., are showing lifts.

The Ravenhead Sanitary Pipe and Brick Company, Ltd., St. Helens, have an exhibit of rustic brick facing, including window openings, mullions, transomes, sills, heads, etc. They also show a sand-faced brick wall in different thicknesses of bricks, Sneck walling in rustic-faced work, clinker paving, and other clay manufactures.

Messrs. Chubb & Son's Lock and Safe Company, Ltd., of London and Wolverhampton, and 3, Cross-street, Manchester, are exhibiting various examples of their specialities and latest developments in the construction of security appliances. A group of four strong-room doors is shown of various qualities, also a new type of party-wall door, made of reinforced concrete covered with steel plates according to a special construction for which the makers have obtained provisional protection for a patent. The door shown measures 6 ft. 3 in. by 2 ft. 9 in., and is

formed of two steel plates made to interlock in such a way that the interlocking pieces and the fastening rods inside between the two plates form the reinforcing members of the concrete filling. The concrete is put in from the open ends, which are then closed by end plates provided with inturned and twisted pieces embedded in the concrete. This particular door is hinged to a section of a concrete wall which is provided with a suitable recess. The door has not its own distinct frame, although Chubb & Sons supply these when required. The fastenings are up and down bolts thrown by a handle and secured by a lock. This door can be supplied hinged or sliding in single or double leaves, with or without frames as required. They can be made to close automatically in case of fire. The fastenings may be simple catches or of a more elaborate character with locks. This construction is also suitable for partitions or complete rooms for fire-resisting and other purposes. The firm's light steel adjustable shelving is shown; also safes of various qualities, including one of the latest anti-blowpipe construction, together with a section of strong-room construction of anti-blowpipe material made up of Chubb's interlocking steel plates with inner steel lining, forming a triple treasury, as supplied recently to several London banks and also to the Commonwealth of Australia. Cases of locks are shown, including Chubb's new springless lock.

Messrs. G. R. Speaker & Co., of 29, Mincing-lane, London, E.C., show a bungalow which is entirely framed with Speaker's "Eternit" sheets, both external and internal walls (also the ceilings), and roofed with red tiles 11¾ in. by 11¾ in., laid with 2¾-in. lap. Bungalows of this description have been erected in all parts of the country by the firm, and they supply their material for all classes of buildings.

The stand of Messrs. C. Jennings & Co., timber merchants, joinery manufacturers, and general woodworkers, Pennywell-road, Bristol (No. 58), is a structure illustrating some of the many kinds of wood goods which they manufacture. Prominent features of the exhibit are fretwork arches and screens, doors in various designs, a polished teak shop-front, and stairs leading from one side of the stand to the other. One elevation shows twenty-four panels, as samples of various kinds of plywood, compo-board, matching, etc. Attention is directed to the specimens of oak and ash plywood. Both kinds are particularly free from defects, and are scraped on one surface ready for use. Other exhibits include two windows, one illustrating C. Jennings & Co.'s P.T.O. fittings, and the other Miller's B.C. system. Doors are shown in a variety of designs, also balusters (round-turned, square-cut, and fret-sawn) and newels, and other examples of their manufactures. Doors are shown in about forty designs, and fencing, garden gates, and balcony balustrading in various designs. Some of the fencing samples are creosoted by force, and others treated with Carbojen (registered) wood preservative. The firm's patent geyser is shown, and there will be demonstrations of its working at frequent intervals, and mouldings, electric light casings, and picture rails are on exhibition, as well as Smokure chimney-pots. The exterior of the stand (with the exception of the shop-front) is treated with Kang-He enamel, manufactured by James Rudman, Cambrian Colour Works, River-street, Bristol. Messrs. Jennings are also exhibiting a four-fold brass-jointed souvenir rule, sold at 7d. each, and a new fully-illustrated catalogue containing 264 pages, which can be obtained at the stand for 5d.

Messrs. Ragosine & Co., Ltd., Albion Wharf, Bow, London, are showing Dixon's White, which is a new paint base used in place of white lead. The makers particularly wish to emphasise that their article is not merely a substitute for white lead; it is, it is claimed, superior to that old-time poisonous substance, and has qualities which the latter does not possess. For instance, white lead becomes blackened by the sulphur compounds contained in vitiated atmosphere, but Dixon's White remains unaltered. An experiment proving this is being shown at the stand. Dixon's White obliterates much more thoroughly than white lead, and the covering power is infinitely greater, while it is much more economical. One great advantage is that the material is non-poisonous, and by using a non-poisonous paint the workman can insure himself against lead poisoning.

At Row G, Stand 74, Elliotts' Moulding and Joinery Company, Ltd., Newbury, the old-established firm of woodworkers, are exhibiting a pair of selected Cuba mahogany doors and

The "Eternit" Stand.

frame, surmounted by a carved over-door. The moulded and raised panels of the doors are heavily bolection moulded and cross banded with satinwood. The whole has been highly French-polished and afterwards cut back to a dull finish. The firm exhibit two yellow pine turned and fluted Ionic columns and carved caps. There are also shown a number of pieces of dado panelling in satinwood, brown oak, Austrian wainscot oak, and Spanish mahogany, together with various samples of mouldings (features of which are the cleanness and sharpness of the work), and numerous photographs of work recently executed. Their two notice-boards, in Spanish mahogany, are worthy of notice. Messrs. Elliott are the manufacturers of an improved kind of revolving door (Buckingham's patent), particulars of which are given in their catalogue.

Messrs. J. & H. Patteson, marble, granite, and mosaic workers, 96, Oxford-road, Manchester, are exhibiting examples of their work in marble for wall linings, marble pavements, marble steps, pedestals for statuary, chimney-pieces, monumental work, etc. In mosaics they show examples of hand-placed Roman mosaic, marble adamant terrazzo, marble Granito pavements, etc., steps in adamant terrazzo and marble Granito in a variety of colourings. An exhibit of the actual working, cutting, and fitting of the marble cubes for the hand-placed Roman mosaic will be given during the progress of the exhibition by Italian mosaic workers taken from the staff of the firm. Messrs. Patteson also show dadoes in their special marble Granito wall lining; alabaster work for fonts, pulpits, reredoses, wall decorations, etc., granite work (examples of every British and foreign granite are shown for buildings, pedestals, monuments, shop-fronts, etc.) and tiling (a selection of specially-designed dadoes in hand-finished and brilliant enamels, and various glazes in a variety of colours). Of monumental work examples are shown of Runic crosses in American and Scotch granites. The Westerley or American granite cross on view is specially designed and worked for this exhibition, the intricate Runic ornament being finely carved and finished. Attention is called to the St. Martin's Cross, a copy of the well-known Cross of Iona. Other examples of monumental work are shown in Carrara marble and Furness limestone. A special exhibit is being made by the firm of a variety of useful and ornamental articles in Cornish and Serpentine marbles, for table christening fonts, pedestals, vases, rose-bowls, candlesticks, etc.

Messrs. Jones & Attwood, Ltd., of Stourbridge, specialists in apparatus and machines for modern sewage works, exhibit at Stand 101, Row K, interesting models of their sprinklers for covering bacteria beds and filters, and converting contact beds so as to increase their efficiency. The models revolve round circular filters and travel to and fro on rectangular ones, and these distributors are automatic, being driven by the sewage itself without cost for power, and a single distributor can be made to travel up and down a filter 300 ft. or 400 ft. in length sprinkling in the form of rain in both directions of travel so that the sewage is well aerated and the filters are rested between each dose, which amounts to not more than one gallon per square yard, the rate of travel being proportionate to the quantity of sewage. This method of sewage purification is now being generally adopted, and enables a filtration of the highest class to be effected even on filters as shallow as 3 ft. Some filters, circular in shape, may be as small as 8 ft. in diameter, and are very suitable for isolated country houses or small institutions. Messrs. Jones & Attwood show many other specialities for use on sewage works.

In Row D, Stand 29, Messrs. D. Anderson & Son, Ltd., Roach Road Works, Old Ford, London, E., show their "Marosa," a wall lining in which some very fine marbling is reproduced. It is made in sheets (24 in. by 16 in. by about ¼ in.) in nine different shades, by means of which some highly decorative effects may be obtained.

In Row E, Stand 46, the Crittall Manufacturing Company, Ltd., of Braintree, show the "Crittall" metal windows, jointed steel sashes, and metal furniture and storage appliances. The "Universal" (patented) casements can be had in all sizes to fill openings to any size, and ventilators of all types to the same detail. They are supplied in solid steel, Koperoid, or bronze. The patent "Fenestra" jointed steel sashes for all classes of commercial buildings are shown, and the metal furniture includes lockers, filing cabinets, hospital fitments, racking, and shelving.

In Row E, Stand 43, Messrs. Pinchin, Johnson, & Co., Ltd., Minerva House, Bevis Marks, E.C., show "The Temple of Minerva," consisting of four sets of double columns, supporting a circular entablature and dome, the whole being surmounted by a cupola. It is entirely finished with Satinette enamel—gloss white and flat white—with the exception of the dome, which is gilt. The Satinette enamel gives a perfectly white, smooth, and lustrous surface, as will be seen from an examination of the columns. It is further illustrated upon a panelled section of wall and a door, where the contrast of gloss white and flat white is revealed. Minerva

paint, which the firm guarantee to be pure, is shown upon a revolving exhibit. Primer, opaque white for undercoats, gloss whites, and flat whites for finishing are displayed in order of application, together with specimen of each of the twenty-four standard colours or stainers and the ninety-six proportionate reductions obtained therefrom by simply adding certain quantities of gloss white. Deydo distemper is also shown. It is not an ordinary distemper, but a washable water paint. Veritone, a new stain and scumble, is shown as a stain on pitch-pine panelling. The panels are finished with Minerva flat varnish, while the stiles and rails are in Minerva brilliant varnish. Several panels are also on view where Veritone is used as a scumbling or graining colour for a ground coat. "Minerva" varnishes, "Silveroid" (a silver paint), "Syronite" (rust preventative), and other specialities are also to be seen.

In Row F, Stand 53, Messrs. Sissons Brothers & Co., Ltd., varnish, paint, and colour manufacturers, of Hull, and 199B, Borough High-street, London, S.E., give in their exhibit a representation of the interior of a first-class modern drawing-room furnished and decorated throughout in the Adam style. A feature of this scheme is that "Hall's Distemper" is used in the colouring all through. The panels into which the walls are divided are tinted with a delicate shade of green, the ceiling being treated in white. All the woodwork, doors, and mantel-pieces are treated in Messrs. Sissons Brothers' "Orientolac" and "Sisco" white japan. The outside of the exhibit, as well as the inside, is designed, decorated, distempered, and painted in a similar manner, the shades being selected from the range of over seventy colours in which "Hall's Distemper" is made. The interior lighting of the stand is in keeping with the general scheme.

## THE LONDON ASSOCIATION OF MASTER DECORATORS.

A MEETING of the General Committee was held at No. 92, Queen Victoria-street on Monday, February 12, Mr. C. E. Wilkinson in the chair.

The Committee proceeded to the consideration of the publication of the revised Report of the Educational Committee, in conjunction with letters from the London County Council appointing February 15 for receiving a deputation.

After discussion it was agreed that the deputation should consist of the members of the Educational Committee, together with Messrs. J. Baird, H. H. Holliday, T. S. Rowden, and Young, and also Mr. A. S. Jennings.

Mr. Anderson proposed and it was agreed that the letter to the members of the Association and the full Report of the Educational Committee should be published.

### Work for Slack Seasons.

The Committee then proceeded to consider the desirability of urging local bodies as a means of relieving distress and meeting trade conditions to arrange their painting and decorating contracts at times when business was slack, and in consequence much unemployment existed.

Mr. Anderson said the matter had to be looked at from many points of view, not from the decorator's point of view only. He had had the matter very much before him for ten or twelve years on the Borough Council of Kensington, where it had come up each winter for discussion. He had endeavoured to get the work of the Borough arranged so as to be done as much as possible in the slack time, and the Borough of Kensington had arranged during the last four or five years to do as much work as possible in that time.

The Chairman asked whether any harm would be done by sending a copy of the resolution of the Association to the various local bodies, asking them to consider it.

Mr. Anderson said it was necessary to formulate some practical scheme showing how it was possible. Most of the public bodies were occupied during the slack season, and to do the work in that season would require a good deal of arrangement.

The Chairman thought most buildings were to a very great extent occupied all the year round.

Mr. Anderson said that, unfortunately, as far as painting was concerned, the majority of the public buildings were done when everybody else was busy, in the long vacation, as it were. The officials were away, and the place was more or less shut up. Even hospitals and schools were always done at that time.

The Chairman thought there could be no slack season in workhouses and hospitals.

Mr. Anderson said there was no slack season with them, but they had the bulk of their work done at the busiest time. It would mean that the officials of those buildings had to take their holidays during the slack time in the trade.

The Chairman asked what the officials had to do with the case.

Mr. Colley said they could not have the workmen in their offices while they were at work.

The Chairman said what he had in his mind was more particularly the question of hospitals, workhouses, infirmaries, and buildings of that kind, where there was no holiday season except for certain of the officials, and he did not see why the officials should be studied in that connexion. They were the last people who should be studied, having regard to the serious nature of unemployment.

Mr. Anderson instanced public libraries as buildings which were used very little during the holiday season.

The Chairman said, taking hospitals and workhouses alone, they would provide a considerable amount of work if they were done while business was slack.

Mr. Colley said it would be impossible to deal with hospitals at the slack time of the year, because they were then fuller than ever.

The Chairman thought they were full all the year round.

Mr. Colley said they were not so full in the summer-time as in the winter, because in the summer they could get many of the patients away to convalescent homes.

Mr. Anderson said he did some work one year at the Chelsea Hospital for Women in the Brompton-road. That hospital arranged for the moving of the patients out of the hospital when the work had to be done, and the hospital was practically empty for two or three weeks. The great point was that all the doctors who gave their services free were away for their holiday at that time, and the principal difficulty seemed to him to be the usages of society. Even workhouses were much more occupied during the winter than the summer. It was a most admirable matter if it could be arranged, but he did not know how it was going to be done. It was no use throwing out vague suggestions without giving some practical directions. Over and over again he had been asked to propose a scheme, and he had been really unable to do so. He should certainly not like to be one of a deputation to go to any public body suggesting that they should have their work done in the slack time of the trade. He had not yet been able to see how it could be worked.

The Chairman thought such experience was very valuable.

Mr. Anderson said he had tried year after year to give employment to men so that they might not be walking about the streets in crowds during the slack season, but he had failed.

Mr. Milton said there was a great deal of work that could be done in winter.

Mr. Dakin did not see that more could be done than pointing out to public bodies the desirability that whenever possible the work should be done in the slack season.

Mr. Milton thought that course had been already pursued.

Mr. Anderson said it had been done year by year by associations and other bodies. At the beginning of each year his Borough Council had had the matter before them, and had received deputations, and had discussed the subject, and had never been able to get a suggestion of what really could be done.

The Chairman said unemployment was not likely to become acute just now, having regard to the fact that the winter was now on the wane.

Mr. Anderson said that if any suggestion could be brought forward now was the time, so that it could go before the various Committees in order that they might have time to formulate anything that could be done for next winter. It was no use going to a Committee in September or October to suggest to them altering their arrangements to do work that winter.

Mr. Anderson thought it would be well to publish the matter in the report of the proceedings, and ask for suggestions from the members of the Association and refer it to the General Committee for further discussion.

It was agreed that the members of the Association and the trade should be invited to offer general suggestions on the subject.

The Committee next considered the subject of adopting a discharge certificate in connexion with the trade. The idea was a certificate which the workman could carry containing particulars of his various employments, the length of time such employment was held, etc.

The Chairman said he would make a note to obtain samples and estimats of the proposed books in accordance with the suggestions that had been offered, and submit them to the next Committee.

It was agreed that the general meeting should be held on March 25, and that the following items should appear on the agenda:—(1) Action to be taken with reference to the Insurance Bill; (2) report of the Educational Committee and the deputation to the London County Council; (3) to discuss the issue of certificates of employment and discharge.

## GENERAL BUILDING NEWS.

NEW CHURCH, FORFAR.

The Lowson Memorial Parish Church, which is to be erected in Forfar, has been designed by Mr. A. Marshall Mackenzie, architect, of Aberdeen, and the building will provide accommodation for about 700 people. It is also proposed to erect a manse at the south side of the church and a hall to seat about 300 people.

NEW BUILDINGS, REGENT-STREET, LONDON.

New premises for Messrs. H. J. Nicoll & Co., Ltd., are being erected in Regent-street from designs by Mr. Henry Tanner. The buildings will form the central feature of a continuous block between Glasshouse-street and Regent-place when the complete reconstruction has been effected. The front elevation has been completed three months within the scheduled time, and the contractors, Messrs. Holland & Hannen, expect that the other alterations will be finished by next September.

ROCHDALE INFIRMARY EXTENSIONS.

The extensions to this infirmary are estimated to cost about 18,000*l.*, and the new work to be erected includes a pavilion to contain fifty-six beds, kitchens, bathrooms, stores, etc. The architect for the work is Mr. Hugh Healey, A.R.I.B.A., of Messrs. Jesse Horsfal & Healey, architects, of Rochdale and Manchester.

NEW HALLS, YOKER.

These buildings are being erected on a site adjoining the Yoker Parish Church, and the seating accommodation provides for 450 persons. The architect for the work is Mr. H. D. Walton, of Glasgow, and the estimated cost of the buildings is 1,600*l.* The contractors are:—Messrs. M'Leod & Campbell, masons; Mr. James Wilson, joiner; Messrs. Peter White & Co., slaters; Messrs. R. P. Duff & Co., plumbers; Messrs. William Graydon & Miller, plasterers; Mr. Simon Kemp, painter.

NEW LIBRARY, CLYDEBANK.

It is proposed to erect a new Carnegie Library at a cost of about 10,000*l.*, and the building will have a frontage of about 100 ft. and an elevation of 40 ft. The architects are Messrs. Gardner & Whyte, of Glasgow.

## TRADE NEWS.

Under the direction of Mr. A. V. Gardner, architect, 164, Bath-street, Glasgow, Boyle's latest patent "air-pump" ventilators have been applied to the New Picture Theatre, Smith-street, Glasgow.

Messrs. E. A. Roome & Co., builders and contractors, of 36, Basinghall-street, E.C., have taken into partnership their manager, Mr. F. J. Gayer. The title of the firm will remain as before.

The validity of Booth's patent as applied to the plant made by the British Vacuum Cleaner Company, Ltd., has been upheld by the House of Lords. The judgment of the Court of Appeal, affirming the judgment of his Lordship Mr. Justice Neville, has been affirmed by the House of Lords.

The Catholic Cathedral Schools, Plymouth, are being supplied with Shorland's warm air ventilating patent Manchester grates and inlet ventilators, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

The well-known joinery works of Messrs. Samuel Elliott & Sons, Ltd., of Caversham, Reading, have been carried on for the last three or four months by the Receiver and Manager, and we are informed that the large staff of skilled workmen have been working overtime in order to cope with the orders in hand. We are asked by the Receiver to state that he is prepared to enter into negotiations for the amalgamation or purchase of the concern, and could probably arrange to finance a considerable portion of the purchase price. Enquiry should be addressed to the Receiver, Mr. Sydney W. Tubbs, F.C.A., 28, Basinghall-street, E.C.

Messrs. Patman & Fotheringham, Ltd., 100 and 102, Theobald's-road, London, have secured a large contract for pulling down and rebuilding Nos. 171 to 177, Great Portland-street, London, W.

On and after the 15th inst. the offices and warehouse of the Yale and Towne Company (from which only a wholesale business is conducted with the trade) will be removed to 17-20, West Smithfield, London, E.C., where considerable additional accommodation has been provided for the business.

WOODWORKERS, LTD.

The first annual report of the Woodworkers, Ltd., who commenced building a new works at Letchworth in November, 1910, and began the manufacture of joinery on June 1 last, shows a trade of 24,693*l.* This is the result of the combined business of the concern and of the General Builders, Ltd., with which it was amalgamated towards the end of last year. After meeting all expenses, charging revenue with depreciation on building plant and machinery, 4½ per cent. interest on loan stock, etc., there was a profit of 985*l.*, from which a dividend of 4d. in the pound has been declared on purchases of customers and on the wages of employees. Mr. William Grant is the managing director of the Woodworkers, Ltd., which has been chiefly engaged in manufacturing the joinery required for the various co-partnership estates.

## APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

At Tuesday's meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

*Lines of Frontage and Projections.*

*Battersea.*—Erection of a building and covered way at the rear of Nos. 24 and 26, Falcon-road, Battersea, to abut upon the northern side of Musjid-road (Messrs. J. A. J. Woodward & Sons for Mr. B. J. Bosher).—Refused.

*Finsbury, Central.*—Projecting crane at a building on the western side of Goswell-road, Finsbury, abutting upon the northern side of Percival-street (Messrs. Hobden & Porri).—Consent.

*Greenwich.*—Erection of buildings next to Beaconsfield-road and Westcombe Park-road, Greenwich (Messrs. Davis & Emanuel for Mr. A. F. Yarrow and Mr. F. E. Elliot).—Consent.

*Hampstead.*—Bay-windows and a porch to two houses on the northern side of St. Cuthbert's-road, Hampstead (Messrs. Rix & Wilkins).—Consent.

*Lewisham.*—Greenhouse at No. 76, Granville-park, Lewisham, next to Eliot-park (Mr. J. W. Marks).—Consent.

*Lewisham.*—Erection of buildings on both sides of Bartram-road, Lewisham (Mr. J. E. Yerbury for the Abbis's Trustees).—Refused.

*Lewisham.*—Addition in front of No. 116, Perry-vale, Lewisham (Mr. A. R. Westworth for Mr. E. C. Christmas).—Consent.

*Marylebone, West.* — Re-erection of the Church of the Annunciation upon a site on the northern side of Bryanston-street and the western side of Old Quebec-street, St. Marylebone (Mr. J. G. P. Meaden for Mr. W. J. Tapper and the vicar and churchwardens).—Consent.

*Marylebone, East.*—Four projecting balconies in front of Nos. 171, 173, 175, and 177, Great Portland-street, St. Marylebone (Mr. R. Angell).—Consent.

*Strand.*—Projecting sign at No. 3, Piccadilly-circus, next to Shaftesbury-avenue (Mr. C. A. Aish for Messrs. Frank, Ltd.).—Consent.

*Westminster.*—Erection of the clock-tower at a warehouse building on the southern side of Vauxhall Bridge-road, Westminster (Mr. H. S. Stowell for Hovis Bread Flour Company, Ltd.).—Consent.

*Woolwich.*—Iron and glass hood at Nos. 68 and 70, Dallin-road, Plumstead (Mr. W. Woolfrey)—Consent.

*Width of Way.*

*Whitechapel.*—Erection of a building at St. Boniface Schools, at less than the prescribed distance from the centre of the roadway of Union-row, Union-street, Whitechapel (Mr. H. G. Leslie).—Consent.

*Width of Way and Lines of Frontage.*

*Kennington.*—Erection of buildings upon a site on the western side of Dolland-street, Lambeth (Messrs. J. A. J. Woodward & Sons for Messrs. J. Dennis and H. Ryland).—Refused.

*Peckham.*†—Erection of a one-story addition at the rear of Nos. 91, 93, and 95, Rye-lane, Peckham (Messrs. W. T. Champion & Son).—Refused.

*St. George, Hanover-square.*—Projecting sign at the Victoria Palace, on the eastern side of Allington-street, Victoria-street (Messrs. F. Matcham & Co.).—Consent.

*Lines of Frontage and Construction.*

*Lewisham.*—Building of a temporary character on the eastern side of No. 163, Killearn-road, Catford, next to Torridon-road (Mr. A. Ward).—Consent.

*Marylebone, West.*—Temporary range of luncheon and store sheds at Lord's cricket ground, abutting upon St. John's Wood-road, Wellington-road, and Wellington-place, St. John's Wood (Mr. W. H. Slatter).—Consent.

*St. George, Hanover-square.*†—Retention of buildings at the premises of the British Motor Cab Company, Ltd., Grosvenor-road, Pimlico (Captain D. A. Lynch for the British Motor Cab Company, Ltd.).—Refused.

*St. Pancras, South.*—Iron and glass shelter over the Pentonville-road entrance to King's-cross Metropolitan Railway-station (Mr. F. Sherrin for the Metropolitan Railway Company).—Consent.

*Width of Way and Construction.*

*Poplar.*—Two temporary iron sheds on the south-eastern side of Deptford Ferry-road, Millwall (Guelph Patent Cask Company, Ltd.).—Consent.

*Width of Way, Frontage, and Construction.*

*Wandsworth.*—Retention of two buildings of a temporary character at the rear of No. 24, Lewin-road, Streatham (Mr. J. P. Bastard).—Consent.

*Space at Rear.*

*Chelsea.*—Alterations to a building at Adam's-mews, Cheyne-walk, Chelsea (Messrs. F. C. Trafford & Son for Mr. H. Smith).—Consent.

*Limehouse.*—Re-erection of the "Cock" public-house, Nos. 3 and 5, Broad-street, Ratcliffe, with an irregular open space at the rear (Messrs. W. Bradford & Sons for Messrs. Taylor, Walker, & Co., Ltd.).—Consent.

*Paddington, South.*—Additions upon the space at the rear of Nos. 114, 114A, and 116, Westbourne-grove, Paddington (Mr. G. A. Sexton).—Consent.

*St. George.*—Erection of a building upon the site of No. 44, Grove-street, St. George-in-the-East, abutting also upon Fairclough-street (Mr. F. E. Mennie for Messrs. A. Miller & Son).—Consent.

*Deviation from Certified Plans.*

*Finsbury, Central.*—Erection of buildings upon the site of Nos. 52, 53, and 54, Chapel-street, Finsbury (Mr. F. C. Spiller for Mr. H. Erdman).—Consent.

*Width of Way and Space at Rear.*

*Westminster.*—Erection of two houses upon a site abutting upon Wood-street, Cowley-street, and Little College-street, Westminster (Mr. E. L. Lutyens for Sir Henry Norman and the Hon. F. McLaren).—Consent.

*Alteration of Buildings.*

*Hampstead.*—Alterations at No. 47, Fairfax-road, Hampstead (Mr. A. C. Cross for the trustees of the late Mr. T. Yeo).—Consent.

*Paddington, South.*—Enclosures to a bath-room at the rear of No. 46, Queen's-gardens, Hyde Park (Messrs. Richardson & Gill for Mr. C. H. Fox).—Consent.

*Westminster.*—Addition to the existing top story of No. 120, Victoria-street, and the erection of an additional story to No. 122, Victoria-street, Westminster (Messrs. C. Heathcote & Sons for the Edinburgh Life Assurance Company).—Consent.

*Cubical Extent.*

*Fulham.*—Erection of buildings at the Manbré Saccharine Works, Brandenburgh-road, Fulham (Manbré Saccharine Company, Ltd.).—Consent.

*Lewisham.*—Additional cubical extent in respect of alterations and additions at the garage of Messrs. Thomas Tilling, Ltd., Molesworth-street and Salisbury-yard, Lewisham (Messrs. Gilbert & Constanduros for Messrs. Thomas Tilling, Ltd.).—Consent.

*Southwark, West.*—Erection of an iron building on the flat roof of Nos. 211-215, Blackfriars-road, Southwark (Messrs. G. Pearson & Son for Messrs. J. Gosnell & Co., Ltd.).—Refused.

*Uniting of Buildings.*

*City of London.*—Uniting of shops in the arcade over Liverpool-street (Metropolitan Railway) station, and buildings Nos. 23 and 24, Liverpool-street, City (Mr. C. de W. Kitcat for the Metropolitan Railway Company).—Consent.

*City of London.*—Uniting of Nos. 17 and 18, Bread-street, City (Mr. G. Bailey for Messrs. Jones, Lang, & Co., and Messrs. Hitchins & James).—Consent.

*City of London.*—Formation of an opening at the ground-floor level between Nos. 38, Lime-street and Nos. 35-36, Lime-street, and No. 16, Fenchurch-avenue, City (London Offices Company, Ltd.).—Consent.

*City of London.*—Uniting of Nos. 11 and 13, St. Andrew's-street, City, by means of an opening at the basement level (Mr. J. Sayer for Messrs. Grimwades, Ltd.).—Consent.

*Finsbury, East.*—Uniting of Nos. 16 and 18, Finsbury-street, City, by means of an opening at the basement level (Mesrs. Stockwell & Co.).—Consent.

*Finsbury, East.*—Uniting of Nos. 17 to 20, West Smithfield, by means of an opening at the fourth-floor level (Mr. G. Vickery).—Consent.

*Finsbury, East.*—Formation of a lift well, to the use of iron doors and teak doors to openings in the division walls on either side of such lift well, and betwen blocks C and D of the premises of the Bovril Company, Ltd., Old-street, Finsbury (Messrs. Lanchester & Rickards).—Consent.

*Hampstead.*—Formation of openings fitted with double-armoured doors at the ground and first floor levels between premises on the western side of Cressy-road, Hampstead (Mr. F. S. Hammond for Messrs. Mansell, Hunt, Catty, & Co.).—Consent.

*Holborn.*—Uniting of Nos. 10 and 11, Hart-street, Bloomsbury, at the ground-floor level (Mr. A. C. Martin for Mr. J. V. Olver).—Consent.

*Holborn.*—Uniting of a building at the corner of Streatham-street and Bloomsbury-street, Holborn (Mr. L. Sharp for Mr. M. Harris).—Consent.

*Southwark, West.*—Use of doors of special construction in lieu of iron doors to openings at the premises of Messrs. J. Pascall, Ltd., Boundary-row and Valentine-place, Southwark (Fireproof Doors, Ltd.).—Consent.

*Wandsworth.*—Formation of openings in the party-wall on the ground and first floor levels between Nos. 2 and 4, East-hill, Wandsworth (Mr. M. Lewis).—Consent.

*The recommendations marked † are contrary to the views of the Metropolitan Borough Councils concerned.*

## PROJECTED NEW BUILDINGS IN THE PROVINCES.*

AYRSHIRE.—Club-house for Dundonald Golf Club (2,000*l.*); Messrs. Duncan & Copland, architects, 146, West Regent-street, Glasgow.

Broughty Ferry.—Esplanade in ferro-concrete (10,000*l.*); Mr. J. K. Roddan, Surveyor, Town-buildings, Broughty Ferry.

Burton-upon-Trent. — Receiving home (2,250*l.*); Mr. T. Jenkins, architect, Burton.

Eastbourne.—Plans have been passed for an addition to Clarence Laundry, Clarence-road, for Mr. G. Deacon, builder; also for additions to premises, Star-road, for the Star Brewery Company; Mr. B. Earp, architect.

Forfar.—School (2,500*l.*); Messrs. Gavin & Soutar, architects, High-street, Forfar. Model dairy (2,000*l.*); Mr. A. Waterson, Surveyor, Town Hall, Forfar.

Fortrose (Ross-shire).—Additions to Springfield (2,000*l.*); Mr. J. P. McDonald, Fortrose.

Gellifaelog.—School (18,980*l.*); Messrs. E. Williams & Sons, builders, Dowlais.

Haslingden.—Grain mills (3,000*l.*); Messrs. P. Drake & Sons, builders, Allerton-road, Bradford.

Heywood.—School (4,500*l.*); Mr. H. Anderson, 3, Longford-street, Heywood.

Houghton (Co. Durham).—School (7,000*l.*); Mr. W. Rushworth, Architect, Shire Hall, Durham.

Inverness-shire.—Additions to Glenmazeraw Shooting Lodge and also to Dalmigavie Lodge (3,000*l.*); Mr. Thomas Munro, architect, 62, Academy-street, Inverness.

Llandilo.—Mansion house; Mr. D. Thomas, architect, Quay-street, Ammanford.

Northampton.—Buildings at Ravensthorpe Waterworks (2,000*l.*); Mr. F. Tomlinson, Water Engineer, Town Hall, Northampton.

St. Helens.—School; Mr. R. C. Wrinch, architect, 16, Museum-street, Ipswich.

Salford.—Reconstruction of Union Offices (4,200*l.*); Messrs. Topham & Adshead, architects, Manchester. A plan has been passed for the reconstruction of the "Horse Shoe Inn," Back Hope-street, Broughton, for the proprietors.

Straftord-on-Avon.—Electric picture palace plans just passed by Council; Messrs. Homer & Lucas, architects, London and Oxford.

Walker.—Baths and wash-houses; Mr. W. J. Meele, Engineer, Town Hall, Newcastle. (Architect to be appointed.)

* See also our list of Competitions, Contracts, etc., on another page

Queens' College, Cambridge, showing President's Lodge.

## THE CARPENTERS' HALL LECTURES:

### HOUSE BUILDING.

THE sixth of the present series of Carpenters' Hall lectures on the Arts Connected with Building was delivered on Wednesday, February 28, at Carpenters' Hall, London-wall, Mr. Percy Preston, Past-Master, presiding, when Mr. M. H. Baillie Scott lectured on "House Building, Past and Present."

The lecturer, who showed a number of interesting lantern slides, said in the modern world, it seemed to him, house building was not taken seriously enough as a subject of art, and, as he believed that art should find (as it had in the past always found) its main expression in the building of houses, which was man's way of decorating, or disfiguring, the world we live in; and as he thought it did not matter so much what we put in our picture galleries as long as our streets are full of living art, he would first consider the houses of the past, by which he meant the houses built in those dark ages of old England before people became sufficiently enlightened and sufficiently educated to build the modern board school and to live in the modern jerry-built suburban villa. It was the noble part of such a company as the Carpenters' Company to foster and encourage that pride and joy in creative work which was the mark of the old craftsman. It was concerned not so much with a minimum standard of wages as a minimum standard of work, and it seemed to him that the chief need in the industrial world of to-day was to study the spirit and methods of our old trade guilds and seek to reconstruct some such system in the training of our craftsmen to give them back that lost heritage of theirs—those deep and satisfying joys which good work alone can give. And the net result of this system in the past was these old houses which we have lost the art of producing. If we study it carefully we should find the first lesson we have to learn from it was the absolutely vital importance of building technique. It was hardly too much to say that the whole of our modern methods and ideals of building were wrong artistically, and we touched here the very root and centre of the failure of modern work. Architects might make beautiful designs on paper, but when you see these designs interpreted by the modern high-class builder you must end by sorrowfully inscribing "Ichabod" over the doorway, for all the glory had departed.

Go to such an old house as Haddon Hall, for example. Apart from the various architectural features which were but passing fashion, where did the root of its beauty lie? Was it not in mere building? Every square yard of its masonry was full of interest and vitality and subtle variety. And what was the principle that underlay it all? We heard a good deal of talk nowadays about texture, as if that were an end in itself instead of a result of right principle. And the principle appears to him to be that building should be an education of materials. And just as the ideal human education was that which evolved all the best in the individual, instead of levelling all to the uniform standard of the particular school, so the ideal education of a material consisted in shaping it to its place in the structure with only such sacrifice of its individuality as its function there demanded. That was always understood in old work. In modern work the desire for mechanical accuracy had led to the obliteration of the characteristic qualities of materials. In this education of a material, then, he meant that the work done in it should help to express those of its qualities which were peculiar and unique. A brick should look like a piece of burnt clay, a bit of mother earth, moulded to man's ends, but still of the earth earthy: stained and marked it might be in its ordeal by fire. As such it was much more than a mere coloured rectangle. We could read its whole life-story in its form and surface.

Any comparison between the methods of the past and present in building disclosed all the difference between a living art and a dead formula. Take, for example, the treatment of a floor in an old cottage. The joists would be full of character. Their outlines would have the slight undulations suggested by the grain. They would not be exactly straight or exactly level. You might go in a dozen cottages and each would vary in treatment. There would also be pleasant undulations in the plaster, and nowhere would we find the brutally rigid, mechanical outlines of the modern room. Turn to any modern text-book on building, and you would find no hint conveyed to the student that construction was anything else but a dead and trite formula. Joists—mere scantlings without any possible kind of interest—were shown there placed 15 in. apart from centre to centre, and below these the inevitable plaster ceiling with its badly-designed moulded cornice and so on. There was no suggestion that the whole art of building begins in the placing and shaping of its materials in such ways that the characteristic beauties of each are drawn out. You would not find a line to suggest that building was an art at all, but it was presented as a peculiarly dismal science. Building thus being made a dead letter, our architects were reduced to conceal the poverty of essential building by all kinds of histrionic superficial adornments. The next vital principle we might learn from the old house was the principle of relation, by which he meant that the beauty of anything was not so much intrinsic as relative, and the beauty of a building depended on the reciprocal relation of its parts to one another, and then to the relation of the whole to its surroundings. In the country house this principle of relation would find itself chiefly expressed by the connexion between the house and Nature. It was in this respect mainly that the modern country has failed. If we consider the modern houses which we build in the country, shall we not generally find that, however well designed they may be in themselves, they leave us with the impression of a cockney importation from the town of the latest developments of architectural thought there? Especially was this the case with the formal XVIIIth-century scheme now so much in vogue. This had its place in the sun, no doubt, and there were natural sites which seemed to demand just this kind of house built in the old sympathetic way. But when you come across one of these formal schemes in a Surrey wood with a few ragged pines in the front garden it made the whole of its natural surroundings appear to want grooming.

Houses in windswept open spaces near the sea and on exposed hillsides alike seemed to demand a certain ruggedness of aspect. They should look like hardy out-door open-air creations, and not seem to demand protection from the elements; and inspiration for buildings in such positions might well be sought from the old castles, which seemed to add so much beauty to wild and rugged places. By level pastures and slowly winding rivers the personality of the house might become more kindly and gentle, and the less rigorous outlines of timber and tile take the place of the more austere qualities which belong to rugged stone and slate.

In close connexion with relation was what might be called "scale." It was chiefly the recognition of scale which made the old cottage so attractive. In these humble dwellings the inevitable smallness of the plan was accepted and appeared right, because every feature and detail was made correspondingly small. The windows, doors, and staircase were all of the cottage kind, and everything was in scale. In the modern cottage or small house the traditions of villadom suggested that smallness was an evil not to be accepted with due humility, but to be protested against wherever possible. If the rooms were contracted on plan they might still remain lofty, windows might be made large, and the staircase could be made a feature, and so on. And the final result was that, instead of a comfortable and comely cottage, the building appeared to be vainly struggling against inevitable limitations. Nothing was so important to remember in cottage building as that the smallness of the parts increased the apparent size of the whole. The beauty of the old cottage seemed to consist largely in the frank acceptance of limitations. Necessity was made a virtue, indeed, and the designer, since he must make a small thing, chose to fall in love with smallness. Since, too, he could only use simple homely materials, he would make homeliness and simplicity his ideals, and so successful was the result that these simple old cottages often put to shame their more pretentious neighbours.

As to the planning of old houses in the earliest times, the house consisted of one room. It was unicellular, and its development consisted in the formation of secondary specialised cells or rooms grouped round the central apartment. In the old English manor house this development proceeded in two opposite directions from a central axis. This axis was the passage which went right across the house at the lower end of the hall or main apartment. On the one side of this were developed the apartments for service, while at the opposite (or dais) end of the hall the withdrawing-rooms and all that part of the house which was devoted to the elegancies of life were added. As these accessory apartments increased the functions of the hall were gradually absorbed by the special apartments, and so it gradually shrank to the dimensions of a mere passage with a staircase in it. It still retained its old central position as the axis of the house, and in this condition we find it in the XVIIIth and XIXth centuries in the plans of the majority of houses, with the difference that on restricted town sites the kitchens have been pushed from their positions on the side of the hall to the back.

While admitting the reasonableness of the plan which had reduced the hall to a passage merely, we found the type of house which had specialised rooms only, not entirely expressive of our needs. It lacked focus and coherence, and as we passed from one specialised room to another specialised room never could we say as of old: "I am here in the house." We never achieved more than the occupation of a compartment. We must either study in the study, dine in the dining-room, sleep in the bedroom, or withdraw to the withdrawing-room. And so we sigh for the old houseplace or hall as a place to foregather and dissemble in. And we sigh for it all the more if we must needs live in a small house, because then our little specialised rooms were each and all too small for comfort, and as we go from one little plastered box to another little plastered box it occurs to us that in the confines of this bit of space we have walled and roofed in surely there was room for one decent apartment for which it might be worth while to sacrifice something. Let us give up studying in the study, withdrawing in the drawing-room, or even dining in the dining-room to get that. And thus we arrive at the conclusion that the requirements of family life in the small house suggest a conception of the house which shall contain at least one good-sized central room, and for the sake of this accessory rooms should either be deliberately eliminated or reduced to a recess in the main apartment. The multiplication of small rooms in the small house was, after all, no expression of actual needs.

In the planning of the modern house let us imitate the old house mainly in this: That its plan should be the outcome of our requirements, and, while so satisfying material needs, it should also minister to something more than those. Let us design it from within outwards, and let its outward aspect be the natural expression of its inward grace.

In the matters of decoration and furnishing much might be learnt from the old house. Why do people, otherwise sane and intelligent, apparently delight in surrounding themselves with all kinds of unnecessary and unbeautiful things? "Copy if you like the old methods of workmanship, because they were the eternally right methods, or copy the old proportions or any other essential or vital principle which is right yesterday, to-day, and to-morrow; but let the superficial saliencies of style go! Within limits such as these we may rightly design our modern rooms on the lines of old ones, imitating nothing in them but the fundamental principles on which their beauty depends. In such work we shall find space for some expression of that personal initiative which was the characteristic of the old work. We, too, may invent and create, and in the expression of our joy in so doing add the essential note to the room."

What were the main conditions of modern life which made it difficult not to imitate the forms of the old house, but at least to practise the methods which led to its beauty? One of the foremost was that obsession of Rome and the academic tradition, under the spell of which authority art becomes tongue-tied and all the spontaneous and human peasant art of the past was replaced by trite formulas. He fully appreciated the great powers shown by our designers in modern classic buildings. But their appeal was largely discounted by the knowledge that theirs was a one-man art, and that they were only realised at great cost by the unremitting and uninspiring toil of unnamed hordes of workers. How different was the impression conveyed by the Gothic building, where the whole structure seemed to have been evolved by a band of intelligent craftsmen, each contributing his share to the beauty of the whole! Such a building was a living organism rather than an academic composition. And so, whatever kind of building we evolve in the future, he thought it should be one which included in its scheme—as Gothic work did—that kind of happy human expression of the creative instinct of the workman which the classic tradition crushes out of existence. Having once rid ourselves of the nightmare obsession of the masterpieces of the past, and having given up all idea of becoming little Christopher Wrens or little Michelangelos, we must next demand a reform in our building by-laws which at present make cottage building impossible. Apply a set of these rules to any beautiful Old English village and its beauty would melt away. The overhanging gables and low-tiled homely rooms of the farmhouse would be anathema. It seemed reasonable that architects who had made a special study of building should be allowed to frame their own rules and not be made to submit to regulations which were condemned by the better informed.

As an architect he found himself with a rooted prejudice in favour of beginning from the foundations upwards, and not from the roof downwards. Give him a universal and common speech of good building, without any architectural nonsense about it, which would lend a homely beauty to the rank and file of building, and then our great buildings would grow naturally out of that. In other arts the value of simple statement was recognised. Why, then, in building alone, in order to command the approval of the critics, was it necessary to be bombastic and diffuse, dragging in the spoils of Rome to give a kind of spurious exterior effect to a building whose real structure was ferro-concrete? Would it not be better for a change to give up the *rôle* of man, the imitative ape, and to take up the nobler and more difficult part of man

**Stadt Stein, near Schaffhausen, Switzerland.**

the creator? But probably the most essential reform required for the recreation of building as an art was the education of the craftsman by the formation of guilds, where art would be approached from the workshop and not from the art school with its dilettante methods. The art school had a way of spoiling horns without making spoons, and its academic traditions were fatal to that folksong kind of beauty which was once the possession of the people. Perhaps one of the latest survivals of this art was in the carving of the old figure-heads on our ships. How delightful it would be in our villages and old towns if, when a memorial was required for a street or square, instead of importing something trite and academic, we could produce locally a gaily-painted wooden effigy which would gain a new kind of beauty as its colours weathered! And then, suppose on entering the village church, if instead of seeing there the usual dull trade-carved figures on the chancel screen, designed by the eminent architect, we found there again the expression of this local art, bright with colour and gay as a wood in spring! This kind of art would mean far more than the varied interest it would give to our towns and villages, for it would stimulate that creative instinct so long stifled, and men would find joy again in the work of their hands.

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## FORM AND VISION WITH REFERENCE TO ART.

**The seventh of the present series of Carpenters' Hall lectures on the Arts Connected with Building was delivered by Mr. W. S. Frith on the 6th inst. in the Hall of the Company, London-wall, Mr. Percy Preston, Past-Master, presiding.**

Mr. Frith, whose subject was "Form and Vision—with Reference to Art," and who showed some excellent lantern views in illustration of his subject, said that in a work of art there might be said to be three principal factors—the thing seen, the person seeing it, and the technical qualities employed in representing it. If art could be exactly defined it would not be art, but science, and it must remain elusive. It was a record of thought and crystallised thought into a form which enabled it to abide with us and to be translated to others. By its art every nation had been judged, for it was felt to be a true index of its condition. All great art brought together its series of impressions, emotions, and experiences into a form which had the effect of removing the veil of extraneous matter that obscured the significant. Science and art, the two principal factors in intellectual development, constitute an interesting partnership, science having a tendency towards materialism, and art, appealing to the emotions and aspirations, had, unless a firm grip be maintained on things as they are, a tendency to become wild and visionary. Nature was the vast store from which art took such treasures as might be required for a definite purpose; if more was taken, it encumbered. Form was the subject of the sculptor's art, his theme being expressed by it. It was in proportion to the wisdom of his selection and his skill in developing and perfecting to express with grace and beauty that his art was vital or otherwise. In order to make a right selection of form the knowledge must be extensive, and a careful, exact, and prolonged copying of Nature essential, as well as reference to accepted masterpieces. But copying, and nothing else, brought into play mainly the more mechanical faculties, the eye observing equally the important and the unimportant, and there was a vital something missing. As science and art run together, so in art does imitation and invention, and, therefore, design should proceed together with copying, and the continual making of sketches in which the imagination could have full play would provide a sound balance. The making of these sketches would greatly assist the student in finding out what it was he must get Nature to teach him.

As to style, it was the tasteful and dignified delineations of the selected subject. But the word was used with reference to particular periods, and it was argued that in the present day, when photography had brought all these within our view, our conception of sculpture was confused beyond solution. There might, however, be the compensation that these varied manifestations of the spirit of the art should give us the opportunity of forming a wider and more comprehensive view—a vision that would include all, and from which a better understanding of the whole might enable a greater order to be evolved. The bringing out of the character was an essential part of art: it was the artist device of explaining to others what you see yourself. What was the lesson of historical styles? Why did these styles persist for a time and then die out? Was it the rule of Fashion? He was convinced the Greek copied Nature in the way experiences had shown him best, and that the Renaissance man was following what he thought the approved Greek method. There arose, however, the point mentioned in a previous lecture in that Hall—*i.e.*, that Greek art was founded on a geometric basis; while the art of the Renaissance was essentially on an anatomical basis. It was not, he thought, pointed out on that occasion that geometric did not only refer to measurement of masses—the correct proportion of the figure and its parts and the curves made by these—but also embraced surface measurement and proportion, and in this included the consideration of the proportions and character of the light-bearing and shadow-bearing surfaces. This was important, as it formed the principal link between sculpture and architecture. For instance, on a blank wall the light and shade of a piece of sculpture was free, but if architectural details, giving a definite scale, were within the visual area, the scale of light and shade in the piece of sculpture must be such as would form an agreeable harmony or contrast. This was the dominating general principle in architectural ornament, whether figure or foliage; when, however, he spoke of harmony it was in the musical sense in which a knowledge of harmony included a knowledge of nominal discords, which were probably the most beautiful parts, and those to which music owed most of its power of expression.

In viewing the path sculpture had followed in the past, it seemed to have started with making a mass indicating the rough outlines of the object, followed up in the direction of obtaining a more convincing likeness; this in time followed by an increased elaboration in the treatment of detail, exalting this at the expense of the more vital qualities, until this had overpowered or demeaned the work, destroying its appreciation at the same time as its high purpose. To those working in times when there was one accepted type of art this progression seemed to have been inevitable; but " with many types before us we may say there is no final style. And that the path for us is, while appreciating all that is excellent which had gone before, to be sure we see with our own eyes, and that we execute with the very fullest skill our hands can attain, the vision presented. See that the craftsman in you takes real joy in his work. What should he delight in if not in the successful exercise of those faculties with which he has been endowed ? "

## CHURCH RESTORATION.

THERE was a good attendance of members at the meeting of the Nottingham Architectural Society, held at their rooms on Tuesday, February 27. In the absence of the President, Mr. E. R. Sutton, F.R.I.B.A., took the chair. After disposing of several business matters, Mr. A. I. West was elected an Associate member.

Mr. Wilfred Bond, Lic.R.I.B.A. and Architect to Croyland Abbey, then read the following paper on " Church Restoration; or Notes on the Repair and Refitting of Churches " :—

"There is no branch of the work of an architect which requires so much and so varied knowledge, or which calls for the exercise of so much skill and forethought, as the care of old churches. The architect requires accurate knowledge on matters structural, archæological, artistic, practical, and even legal. There is, moreover, no department in which his work is subjected to wider criticism. There is the criticism of architects and others who have really expert knowledge, which is valuable. Then the clerical critics, all of whom are deeply interested in the subject, and not a few have intelligently studied it and can assist the architect materially. There are a few, not often to be come across, but nevertheless in existence, who seem to think that their office and position constitute them authorities on church architecture. In such cases it is usually their only claim. Lastly, the general public, every one of whom is, or considers himself, quite capable of saying the last word as to what should or should not be done to his parish church.

The path of the struggling church architect is not a bed of roses, but, great as are the difficulties, the rewards, though unfortunately not financial, are equally great. The work is of the most absorbing interest and the study needful equally so.

In tackling the work at an old church the first and most important consideration is always the repairs to the actual fabric. These should be executed in the most conservative manner possible. Walls should be very carefully repaired and pointed and all cracks and voids well filled and grouted in. In most cases it will be found best to point stone walls with mortar composed of lias lime and coarse sand rather than with cement. Facing stones should only be renewed when their decay has gone so far that they are a danger to the stability of the wall. Stones frequently decay on the surface and then weather to quite a good hard face. Such stones can often be retained by weather-pointing the lower joint so as to keep the wet from penetrating the wall below. When a facing stone has decayed so far that its renewal is imperative it should be replaced with similar stone or a sound stone which will quickly weather to the same colour as the surrounding wall.

Good stone should invariably be used for repairing stonework, patching up with cement, or artificial stone, and plaster abominations should be avoided. I can never see why it is declared to be so wicked to repair stone with stone, but quite right to fake it up with cement or mortar and bits of tile. Where patching has been done in brickwork which is sound there is no harm, and often much advantage in not disturbing it—not that there is any real archæological value in a stone wall patched with brick; but it has generally weathered to a tint harmonising far better with the old stone than new stone would for many years.

Decorative stonework should, generally speaking, not be renewed except for constructional reasons. Where stones have to be replaced which have had carving on them those blocks should be left plain, as they were sometimes even in mediæval times, unless a really first-rate carver can be afforded. Good carving is never cheap.

The general dryness of walls can be improved by a concrete or asphalt channel round the outside with drains of socketed pipes to carry off the water. If common land drains are used care must be taken to keep them well above the foundations, otherwise the drainage of the subsoil will cause shrinkage leading to disaster. Such a channelling will often allow eaves gutters and rainwater spouts to be dispensed with. Where a dripping eave is possible it is much better without the hard lines of iron spouting. Besides, one of the last things churchwardens in the country seem to be able to afford is a little paint for eaves gutters.

Old roofs, generally of oak, require very careful repair. Many an old oak roof has been ruthlessly torn off and replaced by a mean and often gaudy pitch-pine one, when careful repair would have made it very nearly as sound as a new one.

Main timbers and tie beams can be carefully spliced, and the junctions of purlins and other timbers strengthened and secured by iron plates on their upper sides, secured by coach screws and concealed bolts without being unsightly. Even the most conservative repairer need not be brutal.

It is a great convenience in carrying out the repair of an old roof to erect an awning over it of tarpaulins, and the work can be deliberately carried out under it without pulling the roof more to pieces than need be.

I once saw a specification for the repair of an old roof, the first clause in which described that the contractor, before proceeding to repair, should carefully lay out in the churchyard all the timbers from the roof for the architect's inspection. The majority of repairable old roofs will hardly be likely to go together again if subjected to such drastic treatment.

Boarding should be renewed with oak boards of varying widths, and the flat surfaces of all the timbers may often with advantage be left from the saw or adzed and not planed; much of the old work will be found so treated. The lead should be recast and laid on deal boarding, and the sheets should be joined in the old manner with welts or hollow rolls, and not on rolls with a wood core. Floors should be carefully relaid on concrete beds and vaults filled up. Old brick or old tiles should not be discarded. They are often the original flooring, and if carefully relaid will make an excellent floor. It is difficult to match them, but if new of the same kind cannot be found the old flooring will probably be sufficient for some portion at least—say, the central abbey, and the sides can be made out with some other paving. Wood platforms are best laid with solid floors or wood blocks kept level with the alleys. It is well to take care that the concrete is good and has a layer of dry rubbish below if the ground is damp, or dry rot may be set up. The colour-wash on internal stonework should be carefully cleaned off with hard brushes, but not tooled or scraped.

Internal plastering should be retained. It is usually original, or has replaced earlier plaster. The XIXth-century restorer, in his terrible zeal for showing the construction, which he quite wrongly thought was invariably shown in mediæval work, said, " Plaster is a sham; let us get back to the good honest stonework "; and tore off the plaster together with the whitewash, often destroying valuable paintings lying between them. The colour-wash should be very carefully removed, so as to disclose any painting there may be on the plastering. Never straighten out new plastering, but have it done with short floats with a natural uneven surface, but without any attempt at studied roughness.

There has been of recent years a good deal of abuse of the professional architect and his methods of carrying out work in old churches. Our friends the builders have also come in for their share. The architect and builder are held up as scamps of the usual kind who, it is more than hinted, increase the cost and scamp the work for their own profit. The remedy for this disastrous state of things is said to be that the work should be undertaken by "young architects with a taste of construction," living on the job and acting under the direction of a certain London society, and done by day work. The advantages of this method of " only paying for the work done, no more and no less," are hardly so attractive when you consider that you also pay for hire of scaffolding, often at an enhanced price, from a local builder, or else purchase it and sell it again, and also purchase the materials retail through an agent of undoubted ability for the job; and the only guide towards the ultimate cost of the work is the architect's approximate estimate.

The store of practical knowledge which builders have and their commercial ability, together with the skill of their specially trained and experienced workmen, is not a thing to be lightly cast away. Where would Croyland west front be but for the wonderful manner in which John Thompson straightened it? The imputation that a builder will scamp the work in order to make it pay is a cheap sneer at a body of honourable men. If people would only employ reliable builders they have nothing to fear on that score, and we know from experience that much church restoration is done at little or no profit.

The disadvantages of contract by a lump sum can be got over by careful specification of work, and in work where it is not possible to ascertain the exact amount by provisional sums or by schedule. This provides for entire elasticity for carrying out the work and for making alterations as the work proceeds, the cost of which, as well as of any additional works, can be ascertained by the schedule. One of the most interesting features of mediæval work is the local variations in different periods. Ancient architecture may be compared to a language with many dialects. This was due in some measure to the happy conditions which necessitated building with materials most readily to be obtained, which generally meant those close at hand. And still more was it the result of the working out of a design or scheme by the local workmen. It was no time of working to drawings produced by eminent London architects, or jobbed by far-off assistants for local practitioners.

The designers and workmen lived and worked on the spot, and though, with the modern possibilities for travel, we can hardly hope to get back to such a happy state of things, I do think that the claims of provincial men to the church work in their own locality is worthy of more attention by those who have the direction of it. They live and work in the district, and are much more likely to appreciate and know local characteristics than the architect from a distance, however eminent. In the middle of last century, nothing later than XIIth or XIIIth century work was more than tolerated, and XVIth and XVth considered debased, and as a consequence, perhaps, of such a narrow view the great idea of church restorers and their architects was to try to exactly restore an old church to what they imagined it to be in the XIIth or XIIIth century and fit it in harmony therewith, with the result that late Gothic work was frequently removed to make way for XIXth-century reproductions of early features. We are saner now, and do not spend our time on " Norman fonts and pulpits " or " Early English " reading-desks and choir stalls.

In the arrangements of the fittings of the chancel the chief difficulty to be faced is that accommodation has to be provided for more people in the chancel than was probably the case when the church was built. The introduction of surpliced choirs has made it the fashion for the singers to be accommodated in the chancel.

There have been attempts of recent years to return to the west end position for organs and singers, reserving the chancel for the clergy and their immediate attendants. From an architectural point of view the gain to the church would be immense, particularly in small country churches. There are, however, practical matters which make such an admirable arrangement impossible, particularly in those places where there is least room. . . In all but a few special cases the choir and organ should be accommodated in or as near the chancel as possible. . .

Although many very beautiful reredoses have been constructed, and the general effect is very fine, yet in the majority of cases it seems to be a mistake, and quite as effective an east end can be got by the old English arrangement of a long altar with a comparatively

low reredos, or a simple dorsal cloth or upper frontal with simple side curtains enclosing the altar, and suitable hangings or other adornments on the east wall. There is, of course, a possibility of a Daylight Saving Bill putting matters in the same state as in the Middle Ages, and our east windows would come in to their own again. . .

The pleasing variety of size and shape of panes so evident in the old windows can be retained, and the ancient ironwork should be repaired and kept. Great harm is done to the appearance of windows, both inside and out, by its removal and by substituting nasty thin bars. Glass painters are the greatest offenders here. The old saddle bars came at more or less regular intervals, and with the stancheons give a little more trouble in designing glass. If I once enter on the subject of stained glass or colour decoration I shall never get to an end. I hold that it is perfectly allowable to put in modern stained glass, provided it is really of the very best and the work of a craftsman, not a commercial firm, as also with colour decoration on walls, as the latter can so easily be white-washed if not considered satisfactory in the next generation."

Having referred to the lighting of a church, the author said, as to heating, "that where expense is no object probably one of the better hot-air systems, assisted by low-pressure hot water for radiators near the doors, is the most satisfactory; next to that low-pressure hot water; and after that, good stoves, which, if supplied by fresh air from the outside, are probably as satisfactory from the heating point of view as anything. They should be placed near the principal entrances. If hot water is employed it is best to avoid channels covered with gratings as much as possible and to let the radiators be sufficiently large to do the heating; a single pipe of moderate size running along the side walls of a church is not unsightly, but the rows of snake-like small-bore pipes which appertain to the high-pressure system, and which the heating engineer delights to turn and twist about everywhere, should be avoided like poison. Where it is possible to get some high-level pipes or radiators there will be less chance of down draughts, but this is seldom possible in an old church without being unsightly. . .

The windows of a church comprise such a commanding position in the building that the careful treatment of the glazing is essential. The old plain clear crown glazing of varying tints of white and green is far more restful than the atrocity known as "cathedral glass." It is not necessary that glass should be opaque. People will not thus be kept from wandering in mind when service or sermon is unattractive. Old windows should be releaded and reused, and by a careful glazier who will use up all the old glass.

The most serious problem ever presented to a church architect is that of making an addition to a mediæval building. Even the most rabid of proppers-up and protectors have to admit that there are cases when the effective use of a church require that some alterations should be made to the fabric. These conditions, they tell us, must not be made by imitating the old building, but be frankly modern in style. This counsel, whilst sounding plausible enough, does not lead very far, as we do not happen to have a modern style. It must be remembered that "Gothic" had never actually died out even before the "revival." The least harmful method is to build simply the additions required, keeping them distinctly subordinate to the old buildings, having a care not to build meanly, but with some of the spirit of the old work. The style of additions is best kept late rather than early in character. Early construction, to say nothing of detail, is hardly possible now. Modern methods and our modern state of hurry and impatience hardly create an atmosphere suited to the mediæval manner.

A very severe self-restraint is necessary for those who handle old buildings. There are some churches where all the merit of the careful repair to the fabric and its seemly fitting has been spoilt by additions bearing the emphatic impress of the too exuberant individuality of the architect. In the fittings and wall decoration considerably more freedom is possible, and the architect has his chance of designing beautiful fittings and decoration, and unfortunately he too often comes in competition with the church shop or stores run by the clerical tailor, whose obliging representative will, with equal celerity, measure the parson for a pair of bags and the church for a reredos or a painted window. There are here and there happily those who care to have good craftmanship with suitable design, and one hopes in church work as in secular that they are increasing in number. The architect who aspires to work in old buildings must study them throughout, and especially inquire into the particular uses for which they were intended, as only thus can they be properly understood."

The Chairman having invited the visitors present to join in the discussion, Messrs. Gill, Hazell, Gascoyne, Taylor, Wright, Gleave, Dickman, and Spencer took part.

In reply to the discussion, Mr. Bond said he personally felt that it was quite allowable to put in parts of new glass to make good an ancient defective window if it were carefully done, and the same with regard to stone carving. At the same time it was far better to leave them blank unless you could do it properly. In answer to a question as to what period it was best to restore to, he said his rule was "always respect the best."

On the proposition of Mr. Sutton, seconded by Mr. A. C. Hazell, the heartiest thanks of the meeting were accorded the lecturer.

## PRESIDENTIAL ADDRESS, DEVON AND EXETER ARCHITECTURAL SOCIETY.

AT the annual meeting of the Devon and Exeter Architectural Society, on March 9, Mr. James Jerman, F.R.I.B.A., delivered his Presidential address, in the course of which he said:—

"There is one matter in the Report of more than ordinary interest. I refer to the part taken by some members of our Council, to whom I feel we are much indebted, in acting with the Committee of the Exeter City Council to revise the building by-laws. This co-operation on the part of the two bodies materially tended to elucidate many points of importance, and one gratefully acknowledges the courtesy of the authority and their responsible officials for seeking assistance of a technical character from those who have a desire and are in many ways responsible for faithfully complying with the important details of construction affecting the comfort and even the lives of our citizens.

### Professional Work.

During the past year a marked endeavour has been made by the Royal Institute to come to terms with the Society of Architects on the subject of recognition and so pave the way to Registration. The work has been one of great difficulty, and matters have proceeded as far as the consideration of the amendment of the Royal Charter of the Institute to enable this desirable movement to be forwarded. One hopes that the present deadlock may be got over when the concessive spirit shown on both sides is generously regarded.

Many important matters are under the consideration of the Parliament of the Profession sitting in Conduit-street, and one of great concern to architects is the revision of the present scale of charges which has been in operation for such a long period. The altered condition of circumstances and the practice in the counties makes the revision not only desirable, but necessary. An official scale must have great weight with the general public, and should there be attached thereto, as is done in some countries, a code of professional etiquette, the result would not only be material but an influence for good in raising the tone of the members towards one another, as well as with the public employing architects. Such an official pronouncement will be of immense interest to client and architect alike in disposing of misunderstandings and clearly stating the position and duties of architects. The important question of copyright has also received attention at the hands of the Institute.

### Professional Education.

The satisfactory position and the recognition of the examinations, as now arranged by the Institute, is a subject for congratulation, and puts the professional status on an altogether higher plane. The recognition of architecture as a part of the curriculum at many of our universities, by the granting of degrees, has strongly induced our students to take advantage of the splendid courses of study now provided at the University of London, University of Liverpool, the Architectural Association, and other institutions. Lastly, the students of our Society, preparatory to proceeding to the larger academical centres, can take advantage of the training supplied at our University College and the art department therein. With opportunities afforded in most of the chief towns in our district the earnest student can be prepared with facilities little dreamed of by some of us who had to work individually to reach the goal by a harder road.

Whilst referring to the subject of education I am tempted to say a word or two on the higher and after culture, so important to the uplifting of a learned profession. One deplores the falling off of the acquisition of archæological knowledge and interest amongst younger architects. The great impulse given to the study of our ancient buildings, more especially churches, during the wave of church restoration during the latter half of the last century acted in the most impelling manner in producing amongst architects many scholarly exponents of mediæval art throughout the country. The decline of this wave of restoration and the revived appreciation for classics and Renaissance traditions had decreased the flow of study, both amongst architects and the clergy, who had done so much in the past in instilling a love for the study of the beautiful buildings under their care. It may be hoped, however, that the newer interest may widen the whole sphere of art and produce even more enthusiastic exponents of historical study of this our elder art.

To advance the training of our younger brethren much might be done locally, and one would suggest, in addition to classics, lectures and visits to buildings under trained guides, that the Council, and others acting with them, might draw up a list of buildings suitable for measured drawings and intimate study. For this purpose there are often charming specimens of minor construction, such as doorways, ceilings, mantelpieces, often available as examples of good work which might profitably be scheduled for attention where it is not possible to select complete buildings of any period. Photographs and descriptions could be prepared to enable the student to proceed without waste of time. In our own immediate neighbourhood of Exeter there is, of course, a wealth of good examples of almost every period and style, and the same applies in a lesser degree to the chief towns of our province. There are few places where some suitable example could not be found for study and measuring.

### Schools of Architecture.

For some years there has been a fully-established school at Athens for the study of Greek architecture on the spot to supplement the preparation afforded by the Schools of Architecture in our own country. The great value of such study cannot be too strongly impressed on the student who desires to proceed on academic lines and draw inspiration from the highest types of classic work. Those of us who were privileged during our recent visit to Rome to see the British School of Architecture and Archæology established there felt that this school in Classic Rome completed a scheme for study on the lines of that already established by the French, German, and American architects, to whom their respective schools had been of inestimable benefit in advancing the genuine study of architecture. The generosity of the Italian Government, supplemented by the additional generosity of those who erected the building, in giving the site and building recently used at Rome for the Fine Arts British Exhibition cannot be over-estimated, and this further aid to study must have its influence for good.

Returning once more to the subject of the Society and its operations, the time appears to be at hand when more work will be expected of the allied societies and more responsibilities thrown on them by the Institute. The approval of applicants for admission to the various ranks of the Institute—especially that of the newly-created class of Licentiates—will require anxious and careful discrimination on the part of our Council, and it should be insisted that all local candidates should first be enrolled as members of our allied Society, for obvious reasons. With the greater interest in and the increasing knowledge of architecture on the part of the public we may legitimately say that the prospects of our profession were never brighter or better. This involves on our parts, both collectively and individually, a strenuous desire to uphold the best traditions of the profession."

## THE PRUDENTIAL ASSURANCE COMPANY, LTD.

FROM the sixty-third annual report of this company we learn that the number of policies issued during the year was 60,012, assuring the sum of 5,396,721*l.*, and producing a new annual premium income of 325,699*l.* The premiums received during the year were 4,812,268*l.*, being an increase of 6,147*l.* over the year 1910. The claims of the year amounted to 3,423,273*l.* The number of endowment assurances matured was 20,862, the premium income of which was 119,586*l.* The number of policies in force at the end of the year was 901,693. In the industrial branch the premiums received during the year were 7,631,408*l.*, being an increase of 205,091*l.* The claims of the year amounted to 2,976,058*l.*, including 277,083*l.* bonus additions. The number of claims and surrenders, including 4,488 endowment assurances matured, was 373,641. The total number of policies in force in this branch at the end of the year was 19,041,748: their average duration exceeds twelve years. The assets of the company, in both branches, as shown in the balance sheet after deducting the amount written off securities, are 81,239,682*l.*, being an increase of 3,710,456*l.* over those of 1910. The valuation has again been made by Mr. Schooling. In the ordinary branch the surplus shown is 1,878,357*l.*, including the sum of 334,311*l.* brought forward from last year. Out of this surplus the directors have added 250,000*l.* to the Investments Reserve Fund, which, after deducting the 175,000*l.* written off value of securities, stands as at December 31, 1911, at 850,000*l.* In the industrial branch the surplus shown is 1,681,551*l.*, including the sum of 506,360*l.* brought forward from last year. Out of this surplus the directors have added 250,000*l.* to the Investments Reserve Fund, which, after deducting the 200,000*l.* written off value of securities, stands as at December 31, 1911, at 650,000*l.* The total surplus of the two branches, as shown by the valuation, is 3,469,908*l.* The directors are pleased to announce an increase in the rate of bonus of both branches of the company, as follows:—In the ordinary branch a reversionary bonus at the rate of 1*l.* 16s. per cent. on the original sums assured has been added to all classes of participating policies issued since the year 1876. This is an increase of 2s. per cent. over the rate declared for the past two years. In the industrial branch a bonus addition will be made to the sums assured on all policies of over five years' duration which become claims either by death or maturity of endowment from March 8, 1912, to March 6, 1913, both dates inclusive. This is an increase over the rate declared for last year of from 10 to 30 per cent. for all policies upon which over thirty years' premiums have been paid.

## LAW REPORT.

KING'S BENCH DIVISION.

(Before Mr. Justice CHANNELL.)

### J. A. Pratt & Co., Ltd. *v.* William Francis Frith.

THIS was a non-jury action in which Messrs. J. A. Pratt & Co., Ltd., of 43, Woodford-road, Watford, who are building material merchants, claimed an injunction restraining defendant, who carries on business as a timber merchant, etc., under the style of Messrs. Frith & Co., at Aylesbury, from breach of a covenant entered into between the parties.

Mr. Sanderson, K.C., and Mr. B. A. Cohen were for the plaintiffs; Mr. Clavell Salter, K.C., and Mr. B. Houghton appearing for the defendant.

The plaintiffs' case was that by agreement dated May 11, 1909, they engaged the defendant for five years, one of the terms being that Mr. Frith should undertake not to carry on or be engaged in business of a similar nature for five years after leaving the plaintiffs employ, within 8 miles of the company's head office at Watford, or within 2 miles of the branch depôts of the company at Harrow and Wealdstone, Sudbury, and Wembley, Amersham, Chesham, Boxmoor, Letchworth, and St. Albans. Messrs. Pratt & Co. determined Mr. Frith's employment during the spring of 1910, and it was now alleged that he had since supplied materials to, and canvassed orders from, customers of the plaintiffs.

The defence was that the plaintiffs had broken their contract in such a way that Mr. Frith was entitled to regard it as at an end, and that he was no longer bound by the restrictive covenant in question.

His Lordship heard considerable evidence, and eventually granted the plaintiffs the restraining injunction they asked for, with costs.

## LONDON COUNCILS.

*Bermondsey.*—Plans have been passed for Messrs. R. L. Stuart & Sons, 194, Lower-road, Rotherhithe, S.E., for the erection of additions at 182, Lower-road, for Mr. C. Offtermatt; also for Mr. J. M. Kennard, architect, 13, Railway-approach, London Bridge, S.E., for the erection of a building in Corbetts-lane, Rotherhithe.

*Brentford.*—The tender of Messrs. George Wimpey & Co., at 485*l.*, has been accepted for paving Ferry-lane.

*Chelsea.*—The tender of the Improved Wood Pavement Company, Ltd., has been accepted for paving a portion of Chelsea-embankment with 9-in. wood blocks, at an estimated cost of 11s. 10d. per yard super., the Company to maintain the paving free of charge for a period of three years.

*Friern Barnet.*—The tender of Messrs. Grounds & Newton, at 3,223*l.*, has been accepted for making-up Torrington Park. Plans and estimates have been approved for making-up Friern-lane at an estimated cost of 1,398*l.*; also for making-up Hollyfield-avenue. Plans have been passed for Mr. W. J. Warren for six houses in The Crescent.

*Hendon.*—An estimate by the Surveyor (692*l.*) has been approved for kerbing, channelling, and making-up the foothpath in a portion of Daws-lane, Mill Hill. Plans and estimates are to be prepared for making-up a portion of Hamilton-road. At an estimated cost of 703*l.* the last portion of Russell-road is to be made up. The following plans have been passed:—Messrs. William Moss & Sons, seven houses, Hammers-lane and Wills-grove, Mill Hill; Mr. A. J. Reynolds, four houses, The Ridgeway; Second Hampstead Tenants, Ltd., flats, Addison-way; Mr. J. Webb, four houses, Hallswelle-road; Mr. W. T. Streather, twelve houses, Ella Russell-gardens; Messrs. Hamiltons, six shops, Hamilton-road; Kensington Freehold Land Trust, garage, rear, The Promenade, Lawrence-hill, Mill Hill; Messrs. Haymills, four houses, St. Dunstan's-road, Golder's Green.

*Hornsey.*—Plans have been passed for Messrs. Cheritons, Ltd., Hampstead, to enable them to make alterations and additions to the Bakery at No. 6, The Broadway.

*Lambeth.*—300 ft. of the sewer in Ship-lane is to be relaid in 9-in. pipes at an estimated cost of 210*l.* The whole of the sewers in the neighbourhood of St. Mary's-square are to be relaid. During the ensuing year paving and repairing, etc., works are to be carried out in the borough at an estimated cost of 35,788*l.* A plan has been lodged with the London County Council by Messrs. J. A. J. Woodward & Sons on behalf of Messrs. J. Dennis and H. Ryland, for the erection of seven houses in Dolland-street.

*Poplar.*—The sewer from East India Dock-road to High-street is to be reconstructed with 12-in. and 6-in. pipes at an estimated cost of 576*l.*

*Rickmansworth.*—Plans have been passed for Mr. Fred Franklin for twelve cottages, Mill End, and for Messrs. Benskin's Watford Brewery, Ltd., for alterations to Western Inn, High-street.

*Watford.*—Plans have been passed for Mr. J. Giffin for the erection of three houses in St. Alban's-road; also for Mr. F. Fisher for shops and offices in High-street and King-street.

*Wimbledon.*—The Borough Surveyor has been directed to prepare plans and estimates of the cost of paving the margins of the carriageways of Worple-road, Hill-road, The Broadway, and part of Merton-road with wood blocks. A portion of the footpath in Worple-road is to be paved with concrete slabs, at an estimated cost not to exceed 294*l.* The Open-Air Swimming Bath Committee have decided to make application to the Local Government Board for sanction to borrow 1,650*l.* for the construction of an open-air swimming-bath. The following plans have been passed:—Messrs. G. Baines & Son, church school, Quicks-road; Mr. W. T. Tanner, additions to "Helena," Alan-road; Mr. R. J. Thomson, additions to "St. Aubyns," Grosvenor-hill; Messrs. W. & C. Brown, Ltd., additions to factory of the British Incandescent Mantle Company, Ravensbury-road; Mr. E. T. Manley, six shops, Durnsford-road. Plans have been lodged by Mr. R. J. Thomson for five shops and offices in Hartfield-road.

## FOREIGN AND COLONIAL.

### Building in Austria-Hungary.

The *Zentral Anzeiger für das öffentliche Lieferungswesen* (Vienna) of February 15 states that the municipal authorities of Brixen recently decided to erect an infirmary in Brixen at a cost of 1,530,000 kronen (about 63,700*l.*). The municipal authorities of Kassa have also arranged to build a hospital there at a cost of 1,600,000 kronen (about 66,700*l.*). The hospital is to have accommodation for 400 beds.

### Water Supply, etc., Roumania.

The *Monitor Oficial* (Bucharest) of February 18 publishes a copy of a Bill presented to the Roumanian Legislature for the grant to the municipal authorities of Tulcea of powers to contract a loan of 1,600,000 lei (64,000*l.*), two-thirds of which amount it is proposed to devote to supplying the town with drinking water, and with a drainage system, and the remainder to be applied to the erection of schools and other buildings.

### Street Construction, Building Material, etc., Argentina.

The *Boletin Oficial* of February 2 publishes the text of a Law (No. 8,854) declaring the necessity for constructing in Buenos Aires an avenue nearly 100 ft. wide to run from the junction of the Calle Rivadavia and Calle San Martín as far as the junction of the Calle Libertad and Calle Lavalle, together with the erection of buildings on each side of the proposed new thoroughfare. In order to carry out this enterprise the municipal authorities of Buenos Aires are empowered to contract either an internal or external loan amounting to 15,000,000 pesos gold (3,000,000*l.*).

## PATENTS.

APPLICATIONS PUBLISHED.*

27,937 of 1910.—Wilhelm George Henry Browne: Slop grate or dish for gullies.

3,861 of 1911.—Herman Meyer Braun and Isaac Diamond: Securing and retaining device for doors and the like.

3,923 of 1911.—Walter Lees, Thomas William Lees, and Archibald Lees: Apparatus for heating buildings and the like.

4,693 of 1911.—Walter James Emms: Gas-heater for hot-water systems, applicable for use with closed kitchen ranges, greenhouses, and for other similar purposes.

5,136 of 1911.—John Doyle: Isolating screen for rooms or compartments in hospitals, public buildings, and the like.

5,510 of 1911.—Samuel Henry Adams: Manhole covers.

9,178 of 1911.—James Henry Bennetts and George Richard Leadsom: Apparatus for operating casements, fanlights, and the like.

9,899 of 1911.—Adrian Eugene Lundstrom: Rising hinges.

10,028 of 1911.—David Mein Nesbit and Ashwell & Nesbit, Ltd.: Radiators for heating buildings and the like, and fittings for the same.

14,197 of 1911.—William Henri Luther: Roof-lights and the like.

18,398 of 1911.—Friedrich Ernest Benzing: Controlling door-lock

21,564 of 1911.—William Henry Colwill: Cowls for chimneys and ventilating shafts.

24,822 of 1911.—Allan Keene Pruden: Metal buildings or constructions.

27,157 of 1911.—Alexander Reid Mauson: Roofing materials.

28,755 of 1911.—George Albert Chaddock: Windows.

28,756 of 1911.—George Albert Chaddock: Windows.

LANGHOLM WATERWORKS.

The Local Government Board have sanctioned the scheme prepared by Mr. Harry W. Taylor, Assoc.M.Inst.C.E. (Messrs. Taylor & Wallin), Newcastle-upon-Tyne and Birmingham, for the augmentation of the water supply of the Burgh of Langholm. By this scheme additional springs in the Ewes Water Valley will be tapped, a new reservoir built, and the distributing in the town considerably improved. The cost is about 6,000*l.*, and the work will be commenced at once.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

# List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv. vi. viii. x.; Public Appointments, —; Auction Sales, xxii.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

## Competitions.

MARCH 15. — **Drammen, Norway.**—RAILWAY-STATION.—Particulars from the Norges Statsbaner, Christiania.

MARCH 15. — **Prestatyn, North Wales.** — LAYING-OUT ESTATE.—Lord Aberconway and the Trustees of the Prestatyn Estate invite designs for laying-out of the estate. Three premiums are offered. Particulars from 33, Henrietta-street, W.C. See advertisement in issue of January 5 for further particulars.

MARCH 16. — **Harrow.** — PUBLIC OFFICES.—The Harrow-on-the-Hill U.D.C. invite tenders for the enlargement of and alterations to their Public Offices. See advertisement in issue of January 5 for further particulars.

MARCH 25.—**Colchester.**—SCHOOL.—Limited to architects practising in the borough.

MARCH 30.—**Edinburgh.**—MEMORIAL TO KING EDWARD.—Limited. See Competition News, p. 151, February 9.

MARCH 31.—**Manitoba, Canada.**—PARLIAMENT BUILDINGS.—The Government of Manitoba invite designs for the new Parliament buildings to be erected in the City of Winnipeg. See advertisement in issue of February 9 for further particulars.

APRIL 20.—**Birmingham.**—BLUE COAT SCHOOL.—Limited to local architects. Assessors, Mr. G. H. Hunt, F.R.I.B.A., and Mr. C. E. Bateman, F.R.I.B.A. Particulars from the Secretary, the Blue Coat School, Birmingham.

MAY 1.—**Rhos Ruabon.**—PAIR OF WORKMEN'S COTTAGES.—Premiums of 10*l.* and 5*l.* Assessor, Mr. Raymond Unwin, F.R.I.B.A. Particulars from Mr. G. Meirion Griffiths, Rhos Ruabon.

MAY 1. — **Wombwell.**—SWIMMING BATHS.—The Wombwell U.D.C. invite designs in competition for public swimming baths, to be erected in Hough-lane, Wombwell, Yorkshire. Three prizes of the value of 40*l.*, 30*l.*, and 20*l.* respectively are offered for the designs placed first, second and third respectively by the assessor. See advertisement in issue of February 16 for further particulars.

MAY 15.—**Portland.**—COUNCIL OFFICES.—The Portland U.D.C invite competitive designs and plans for Council Offices. See advertisement in issue of March 8 for further particulars.

JUNE 1.—**Dunfermline.**—INSTITUTE AT NETHERTOWN.—Cost not to exceed 7,000*l.* Premiums of 20*l.*, 15*l.*, and 10*l.* Assessor, Mr. E. A. Jamieson. Particulars from the Secretary, Carnegie Trust, Abbot-street, Dunfermline.

JUNE 28. — **Hale, Cheshire.**—TOWN PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale.

JUNE 30.—**Padiham.**—TOWN HALL, BATHS, ETC.—Premiums 40*l.* and 20*l.* Particulars from Mr. J. Gregson, A.M.Inst.C.E., Surveyor's Office, Padiham.

JULY 1. — **Dusseldorf. — A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.**

AUGUST 30. — SAXON SNELL PRIZE. — Fifty guineas; with medal, is offered for essay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

NO DATE. — **Cardiff.** — FOOTBALL STANDS.—Premiums 30*l.*, 20*l.*, and 10*l.* Particulars from Mr. C. S. Arthur, 53, Queen-street, Cardiff.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in Competition News, December 1, page 635.

NO DATE. — **Ormskirk.** — CLUB-HOUSE.—Competitive plans are invited for proposed club-house for Ormskirk Golf Club. See advertisement in issue of March 1 for further particulars.

NO DATE. — **Sheffield.** — CRIPPLES' HOME. — Limited to local architects. Mr. E. M. Gibbs, F.R.I.B.A., and Mr. F. E. P. Edwards, F.R.I.B.A., assessors.

NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

## Contracts.

### BUILDING.

*The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.*

MARCH 15.—**Hepworth.**—ADDITIONS.—For erection of additions and alterations to the stores for the Hepworth Industrial Society, Ltd. Plans seen, and quantities from Mr. J. Berry, architect and surveyor, 3, Market-place, Huddersfield.

MARCH 16.—**Eccles.**—STORE.—Erection of a store-shed in the Town Hall yard, Irwell-place. Drawings, etc., seen, and quantities, on deposit of 1*l.* 1s., from the Borough Surveyor, Town Hall, Eccles.

MARCH 16.—**Pontymister.**—ALTERATIONS.—For alterations to the Forge Hammer Inn. Particulars with Mr. C. M. Davies, M.S.A., High-street, Merthyr Tydfil.

MARCH 17. — **Macclesfield.** — ADDITIONS.—For additions at the public baths. Specifications and quantities from Mr. Chas. W. Stubbs, Borough Surveyor.

MARCH 18. — **Arbroath.** — ALTERATIONS. — For altering and adapting the corn exchange and butter market for cinematograph entertainments. Plans and specifications with Mr. P. C. Smith, Burgh Engineer, Arbroath; or Mr. D. Tullis Dunn, Surveyor, 112, Bath-street, Glasgow. Deposit of 1*l.*

MARCH 18.—**Dalton.**—ADDITIONS.—Erection of additions to Greenside Store, for the Huddersfield Industrial Society, Ltd. Plans seen, and quantities from Mr. J. Berry, architect and surveyor, 3, Market-place, Huddersfield.

MARCH 18. — **Dungannon.** — HOUSES. — The Governors of Charles Sheils Institution, Dungannon, invite tenders for the erection of a block of houses, laundry, etc., adjacent to the present houses. Plans and specification with Messrs. Young & Mackenzie, architects, Scottish Provident Buildings, Belfast, and quantities from Mr. S. C. Hunter, building surveyor, Belfast, on deposit of 2*l.* 2s.

MARCH 18. — **Harrogate.** — ALTERATIONS.—For alterations to the old Town Hall. Plans seen and quantities from Mr. C. E. Rivers, A.M.Inst.C.E., Borough Engineer and Surveyor.

MARCH 18. — **Huddersfield.** — SHELTER. — For erection of a shelter in Norman Park, Birkby. Plans, specifications, and general conditions seen, and quantities and forms of tender from Mr. K. F. Campbell, M.Inst.C.E., Borough Engineer and Surveyor, Peel-street.

MARCH 18.—**Kendal.**—HOUSES.—For erection of two additional almshouses on Aynam-road. Plans and quantities with Mr. John Hutton, Lic.R.I.B.A., architect, Kendal.

MARCH 18.—**Lancaster.**—WALLS.—For erection of walls on Slyne-road. Particulars and forms of tender with the Borough Surveyor.

* MARCH 18. — **Lewes.** — SCHOOL. — The East Sussex Education Committee invite tenders for new secondary school for girls. See advertisement in this issue for further particulars.

MARCH 19.—**Belfast.**—PICTURE PALACE.—For erection of new picture palace at Newtownards-road, for Irish Electric Palaces, Ltd. Quantities from Messrs. M'Carthy & Brooks, Scottish Provident-buildings. Plans and specification with Mr. Thomas Houston, architect and civil engineer, Kingscourt, Wellington-place, Belfast.

MARCH 19.—**Linthwaite.**—HOUSES.—Erection of six dwelling-houses near Royal Oak. Plans seen, and quantities from Messrs. Lunn & Kaye, architects and surveyors, Milnsbridge.

MARCH 19.—**Middlesbrough.**—ADDITIONS, ETC.—The North-Eastern Railway Company invites tenders for additions and alterations to offices, Middlesbrough Goods Warehouse. Plans and specification with the Station-master, Middlesbrough. Quantities and information from Mr. William Bell, the company's architect, at York.

MARCH 19.—**Pontypool.**—ALTERATIONS.—For alterations and improvements to the George-street Council School. Plans and specification with Mr. John Bain, F.R.I.B.A., County Council Offices, Newport, Mon.

MARCH 20. — **Keighley.** — ALTERATIONS. — For alterations to the cottage, No. 210, Oakworth-road. Drawings seen, and specification and quantities from Messrs. Moore & Crabtree, architects, York-chambers, Keighley.

MARCH 20.—**Keighley.**—TOOL-HOUSE.—Erection of a tool-house at the Sewage Farm, Steeton. Also for laying of water main in Thornhill-road, Steeton. Plans, specifications, and quantities with Mr. Thomas Burton, Surveyor and Sanitary Inspector, 80, Cark-road, Keighley.

MARCH 20.—**Lurgan.**—FACTORY.—For erection of a factory, etc., at Tanderagee-road, Lurgan. Plans and specification with Messrs. Young & Mackenzie, architects, Scottish Provident Buildings, Belfast, and quantities from Messrs. W. H. Stephens & Sons, building surveyors, Belfast, on deposit of 2*l.* 2s.

MARCH 21. — **Abercynon.** — WALL, ETC. — For taking down and rebuilding about 50 yds. of river wall, with construction of breakwaters in the river bed near the Glyncoch Mill. Plans, specification, and quantities from Mr. W. R. Harris, Clerk to the Committee, Town Hall, Merthyr Tydfil.

MARCH 21.—**Egremont.**—COTTAGES.—Erection of two cottages at Briscoe Mill. Plans and specifications with Messrs. W. G. Scott & Co., architects and surveyors, 2, Park-lane, Workington.

MARCH 21. — **Rhondda.** — HOUSE.—Erection of manager's house at Wattstown, Rhondda. Plans and specification seen, and quantities on deposit of 2*l.* 2s., from Messrs. A. O. Evans, Williams, & Evans, architects, Pontypridd.

MARCH 21.—**Sherborne.**—COTTAGES.—For erecting thirty-one workmen's cottages on the Ludbourne Hall Estate. Plans and specifications with Mr. Duncan Brown, Surveyor, Council Offices, South-street, Sherborne.

MARCH 22.—**Batley.**—ADDITIONS, ETC.—For alterations or additions to the Batley (Boys') Grammar School in Carlinghow-hill. Plans, specifications, and quantities with Messrs. W. Hanstock & Son, Branch-road, Batley.

MARCH 22.—**Bourne.**—VILLAS.—For erecting a pair of villas in West-road. Plans and specifications with Mr. T. A. Morris, West-street, Bourne.

MARCH 23.—**Orkney.**—ADDITION.—For construction of an addition of 140 ft. to the pier at Scapa, Orkney, in cement concrete, the widening of the existing pierhead by 7 ft., erection of a Customs watch-house, and other works. Plans and specifications by Mr. M. Heddle, engineer, Broad-street, Kirkwall. Specification and quantities on deposit of 1*l.* 1s. to Mr. D. J. Robertson, Clerk to the Orkney Harbours' Commissioners, Kirkwall.

MARCH 25.—**Belfast.**—BUILDING.—The Great Northern Railway Company (Ireland) invite tenders for the erection of a brick building, containing a sand store and furnace, at their Adelaide and Windsor locomotive depôt, near Belfast, and also for a two-story house at Castleblayney Station. Drawings and specifications at the Engineer's Offices at Dublin and Belfast, and quantities and forms of tender from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street Terminus, Dublin. Deposit of 2*l.* 2s.

MARCH 25.—**Braintree.**—BATH.—Construction of an open-air concrete swimming-bath. Plans and specification with Mr. H. H. Nankivell, Surveyor, Vestry Hall, Braintree.

* MARCH 25.—**Southampton.**—ALTERATIONS.—Tenders are invited for alterations to No. 122 and 124, Above Bar, Southampton. See advertisement in this issue for further particulars.

MARCH 26.—**Cradley.**—OFFICES, ETC.—The Great Western Railway invites tenders for the erection of a goods shed, offices, etc., at Cradley, Staffs. Plans and specification seen, and forms of tender and quantities at the office of the Engineer at Wolverhampton Station.

MARCH 26.—**Croydon.**—HOUSE, ETC.—Erection of a boiler-house and chimney at the Borough Hospital. Plans and specifications seen, and quantities and form of tender at the office of the Borough Engineer, Town Hall, Croydon. Deposit of 1*l.* 1s.

MARCH 26.—**Durham.**—BUILDINGS.—For erection of a new block of college buildings, for the St. John's College, Durham University. Specifications and quantities with Messrs. J. Potts & Son, architects and surveyors, 12, Eldon-square, Newcastle-on-Tyne. Deposit of 2*l.* 2s.

MARCH 26. — **London.** — ADDITIONS, ETC. — Alterations and additions to the Marsh-street boys' school. Names to the architect, Mr. H. Prosser, M.S.A., Architect to the Committee. Quantities on deposit of 5*l.* to Mr. T. W. Liddiard, Secretary to the Committee, Education Committee Offices, High-street, Walthamstow.

MARCH 26. — **Oldham.**—EXTENSION.—For erection of an extension of the existing Town Hall and Municipal Buildings. Plans seen, and quantities and forms of tender from the architects, Messrs. Taylor & Simister, 29, Queen-street, Oldham. Deposit of 1*l* 1s.

* MARCH 26. — **Sheffield.**—PURIFYING HOUSE.—The Directors of Sheffield United Gas Company invite tenders for erection of a brick and stone purifying house. See advertisement in this issue for further particulars.

MARCH 27.—**Belfast.**—ALTERATIONS.—For structural alterations at the Ormeau-avenue Baths. Plans and conditions seen, and specification at the office of the City Surveyor; deposit of 1*l.* 1s.

MARCH 27. — **Bridgend.** — ADDITIONS. — For alterations and additions to Emlyn House.

## BUILDING—*continued.*

*The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.*

Plans and specifications seen, and quantities on deposit of 2*l.* 2s. from Messrs. Geo. F. Lambert & Son, architects and surveyors, Bridgend.

MARCH 27. — **Chelmsford.**—DWELLINGS.—Erection of thirty-eight working-class dwellings, in five blocks, on a site adjoining Rainsford-lane. Forms of tender, plans, and specification at the Borough Engineer's Office, 16, London-road, Chelmsford.

✱ MARCH 28.—**Bristol.**—ALTERATIONS, ETC., TO WORKHOUSE.—The Bristol Guardians invite tenders for the builder's work in connexion with alterations and additions to the Southmead Workhouse. See advertisement in this issue for further particulars.

MARCH 28.—**Portsmouth.**—REPAIRS, ETC.—For certain repairs and additions to the ferro-concrete and timber work to the landing-stage at the South Parade Pier, Southsea. Drawings and specification, on deposit of 1*l.* 1s., to Mr. G. Hammond Etherton, Town Clerk, Town Hall, Portsmouth.

✱ APRIL 3.—**Plymouth.**—NEW QUARTERS.—The Secretary of State for War invites tenders for warrant officers' and married soldiers' quarters, Fort Bovisand, Plymouth. See advertisement in this issue for further paticulars.

APRIL 3.—**Salisbury.**—ROOF, ETC.—For erection of a new roof for the engine-room at the sewage-disposal works. Plans and specification seen, and form of tender from Mr. W. J. Goodwin, A.M.Inst.C.E., City Engineer and Surveyor, Municipal Offices, Salisbury.

✱ APRIL 15.—**Tonbridge.**—SCHOOL.—The Kent Education Committee invite tenders for erection of a new girls' school. See advertisement in this issue for further particulars.

NO DATE.—**Buckden.**—HALL.—Erection of a township hall at Buckden, near Skipton. Plans seen and quantities from Mr. J. W. Broughton, architect, 19, High-street, Skipton.

NO DATE.—**Ely.**—HOUSE, ETC.—Erection of superintendent's house, chief constable's offices, and constables' cottages. Mr. R. S. W. Perkins, County Surveyor, Ely. Deposit of 1*l.* 1s.

NO DATE.—**Goole.**—ALTERATIONS.—For alterations to the house, Marshfield-road. Plans and specifications with Mr. F. Turner, architect, Goole.

NO DATE.—**Haverthwaite.**—SCHOOLS.—Alterations and additions to the Haverthwaite Schools. Plans seen, and quantities from Messrs. Settle & Brundrit, A.R.I.B.A., architects, Ulverston and Barrow-in-Furness.

NO DATE.—**Lossiemouth.**—VILLA.—Erection of a villa. Mr. R. B. Pratt, architect, Elgin.

NO DATE.—**Rawdon.**—SHED, ETC.—For erection of a new woollen shed, engine and boiler house, etc., Park Mills, Rawdon. Mr. George Foggitt, architect, Yeadon.

NO DATE.—**Scunthorpe.**—EXTENSIONS, ETC.—The Frodingham Iron and Steel Company, Ltd., invite tenders for extensions and alterations to office premises. Quantities and drawings with the Frodingham Iron and Steel Company, Ltd., Scunthorpe, Lincolnshire.

## ENGINEERING, IRON, AND STEEL.

MARCH 19. — **Belfast.** — BRIDGE.—The Great Northern Railway Company (Ireland) invite tenders for the construction of a bridge, with brick abutments and steel superstructure, under main lines, near Belfast. Drawings at the Engineer's Offices at Dublin and Belfast, and drawings, form of tender, specification, and quantities from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street Terminus, Dublin. Deposit of 2*l.* 2s.

MARCH 30.—**Bedford.**—BRIDGES.—For construction of two bridges over the River Ouse and the Tailrace from Cardington Mill. General conditions, specification, and form of tender from the Engineer, Major Hector Tulloch, C.B., R.E., No. 28 Victoria-street, London, S.W. Deposit of 3*l.* 3s.

APRIL 3.—**Blackpool.**—HEATING.—For heating the Palatine-road new Council school. Particulars, with plans from Mr. John S. Brodie, Borough Engineer.

## FURNITURE, PAINTING, MATERIALS, etc.

✱ MARCH 25.—**London, W.**—WOOD FLOORING.—The St. Marylebone Guardians invite tenders for laying maple and pitch-pine flooring at Workhouse, Northumberland-street, Marylebone, W. See advertisement in this issue for further particulars.

✱ MARCH 26. — **Willesden.** — VANS. — The Willesden D.C. invite tenders for supply of slop vans and water vans. See advertisement in this issue for further particulars.

✱ MARCH 27.—**Dartford.**—ALTERATIONS, PAINTING, ETC.—The Metropolitan Asylums Board invite tenders for fire-resisting works, cleaning, and painting works at the Small-pox Hospital. See advertisement in this issue for further particulars.

✱ MARCH 27.—**Grays.**—TEAK DECK.—The Metropolitan Asylums Board invite tenders for relaying the upper deck of the training ship *Exmouth* in teak. See advertisement in this issue for further particulars.

✱ MARCH 27.—**Littlehampton and Hampstead.**—PAINTING, REPAIRS, ETC.—The Metropolitan Asylums Board invite tenders for cleaning, painting, and repairs at the following institutions:—Millfield, near Littlehampton, and the Fever Hospital, Hampstead, N.W. See advertisement in this issue for further particulars.

APRIL 2. — **London.**—PAINTING.—For painting, etc., a portion of the interior of schools, High-road, Leytonstone. Forms of tender and specification, on deposit of 1*l.* 1s., from Mr. D. Thomas, Clerk to the Board, Bishops-road, Victoria Park, N.E.

## ROADS, SANITARY AND WATER WORKS.

MARCH 21. — **Naburn.** — SEWERAGE.—For construction of works of sewage disposal at Naburn, near York. Plans, specification, quantities, etc., on deposit of 3*l.*, from Mr. F. W. Spurr, City Engineer, Guildhall, York.

✱ MARCH 27.—**Hampstead.**—TAR-PAVING.—The Metropolitan Asylums Board invite tenders for tar-paving works at the Fever Hospital at Hampstead. See advertisement in this issue for further particulars.

✱ MARCH 27.—**Hither Green.**—ROAD DRAINAGE.—The Metropolitan Asylums Board invite tenders for road drainage at the Park Hospital, Hither Green-lane, S.E. See advertisement in this issue for further particulars.

✱ MARCH 28.—**Bath.**—HEATING, WATER, ELECTRICAL WORK, ETC.—The Bristol Guardians invite separate tenders for:—(*a*) Boilers, economisers, steam pipes, pumps, heating apparatus, hot and cold water mains and services, hydrants, kitchen fittings, etc.; (*b*) electric light generating plant; (*c*) laundry machinery, motors, and appliances, all of which are in connexion with the alterations and additions to the Southmead Workhouse. See advertisement in this issue for further particulars.

# Auction Sales.

| Nature and Place of Sale. | By whom Offered. | Date of Sale. |
|---|---|---|
| *STOCK OF TIMBER, 115, BETHNAL GREEN-ROAD, E.—On the Premises | Joseph Hibbard & Sons | Mar. 19 |
| *DEALS, BATTENS, BOARDS, TIMBER, ETC.—Great Hall, Winchester House, E.C. | Churchill & Sim | Mar. 20 |
| *FREEHOLD PROPERTY, FINCHLEY-ROAD—At the Mart | Fox, Bousfield, Burnetts, & Baddeley | Mar. 20 |
| *FREEHOLD SHOP PLOTS AND SITES, ACTON—George and Dragon Hotel, Acton | Henry H. Collier & Madge | Mar. 28 |
| *HOUSE AND SHOP, ST. PANCRAS—At the Mart | Rutley, Son, & Vine | April 2 |
| *HOUSES, SHOPS, ETC.—At the Mart | Rutley, Son, & Vine | April 2 |

## SOME RECENT SALES OF PROPERTY:

### ESTATE EXCHANGE REPORT.

March 5.—By LEONARD T. DAVEY.

| | |
|---|---|
| Bromley, Kent.—4, 6, 8, 12, 14, and 16, Florence-rd., u.t. 56 yrs., g.r. 39*l.*, w.r. 201*l.* 10s. | £780 |
| 4 and 6, Glebe-rd., u.t. 56 yrs., g.r. 13*l.*, w.r. 59*l.* 16s. | 260 |

By HIBBARD & WHITTINGHAM.

| | |
|---|---|
| Bermondsey.—54 to 59, Martin-st., u.t. 34 yrs., g.r. 10*l.* 10s., w.r. 148*l.* 4s. | 725 |

By MARK LIELL & SON.

| | |
|---|---|
| Shoreditch.—242, 244, and 246, Brick-la.; 1, 2, and 3, Princes-ct., f., e.r. 139*l.* 14s. | 1,350 |
| Dalston.—5 and 7, Brownlow-rd., u.t. 33 yrs., g.r. 10*l.*, y. and w.r. 73*l.* 12s. | 330 |

By C. W. MAYNE.

| | |
|---|---|
| South Kensington.—11, Coleherne-ter. (s.), u.t. 38 yrs., g.r. 15*l.*, y.r. 130*l.* | 1,350 |

By WEATHERALL & GREEN.

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|---|---|
| Aldershot, Hants.—Farnham-rd., plot of land, f. | 100 |

By GEORGE LOVEITT & SONS.

| | |
|---|---|
| Berkswell, Warwick.—Waste-la., The Orchard, f. | 440 |
| Coventry, Warwick.—49 and 51, Cox-st., f. | 405 |
| 22, 24, and 26, Lower Ford-st., f | 655 |

March 6.—By EDWIN FOX, BOUSFIELD, BURNETTS, & BADDELEY.

| | |
|---|---|
| Norwood.—Central Hill, f.g.r. 15*l.*, reversion in 23 yrs. | 350 |
| Whetstone.—High-rd., f.g.r. 22*l.*, reversion in 16 yrs. | 490 |
| Stepney.—64, Maplin-st., f., w.r. 20*l.* 16s. | 110 |

By HOBSON, RICHARDS, & Co.

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|---|---|
| Ponders End.—Northampton-rd., f.g. rents 17*l.* 10s., reversion in 66 yrs | 290 |

By A. PREVOST & SON.

| | |
|---|---|
| Mile End.—4, Grafton-st., u.t. 30 yrs., g.r. 4*l.* 10s., w.r. 54*l.* 12s. | 275 |
| 37, Grafton-st., u.t. 37 yrs., g.r. 6*l.*, w.r. 46*l.* 16s. | 235 |
| Rectory-sq., Rectory Cottage, u.t. 51 yrs., g.r. 3*l.* 10s., w.r. 29*l.* 18s. | 135 |

By ROBSON & PERRIN.

| | |
|---|---|
| East Ham.—37 and 39, Henderson-rd., u.t. 78 yrs., g.r. 4*l.* 4s., w.r. 61*l.* 2s. | £250 |
| Clapton.—5, Sewdley-st., u.t. 65 yrs., g.r. 5*l.* 10s., w.r. 36*l.* 8s. | 135 |

By T. B. WESTACOTT & SONS.

| | |
|---|---|
| Highbury.—58 and 60, Riversdale-rd., u.t. 58½ yrs., g.r. 12*l.* 12s, e.r. 72*l.* | 500 |

By DOUGLAS YOUNG & Co.

| | |
|---|---|
| Notting Hill.—43, 44, and 45, St. James-sq., f., y. and e.r. 140*l.* | 1,500 |
| Battersea.—3, 5, 7, and 9, Ingrave-st., u.t. 37 yrs., g.r. nil, w.r. 126*l.* 16s. | 630 |
| Clapham.—27, Mayflower-rd., u.t. 70 yrs., g.r. 10*l.*, e r. 45*l.* | 350 |

By GEORGE LOVEITT & SONS.

| | |
|---|---|
| Stockingford, Warwick.—Galley Farm, 75 acres, f. | 2,390 |

By SEDGWICK, SON, & WEALL.

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|---|---|
| Rickmansworth, Herts.—Swan Hotel and premises adjoining (unlicensed), area 3 a. 1 r. 27 p., f. | 6,000 |

March 7.—By H. HOOKEY & Co.

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|---|---|
| Streatham.—82 and 84, Mitcham-la., f., w. and e.r. 117*l.* | 1,350 |
| Croydon.—Lower Church-st., Dome Picture Palace, beneficial lease for 3 to 21 yrs. at 100*l.* per annum. | 100 |

By MONTAGU & ROBINSON.

| | |
|---|---|
| New Southgate.—Bosworth-rd., f.g. rents 19*l.* 10s., reversion in 92¾ yrs. | 435 |

By NEWBON & SHEPHARDS.

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|---|---|
| Harringay.—515, Green-lanes (s.), u.t. 83 yrs., g.r 15*l.*, y.r. 60*l.* | 490 |
| Holloway.—65, Hornsey-rd. (s.), u.t. 33¾ yrs., g.r. 8*l.*, y.r. 40*l.* | 185 |
| Barnsbury.—32, Barbara-st., u.t. 48¾ yrs., g.r. 7*l.* 10s., y.r. 36*l.* | 200 |
| Islington.—89, 91, 93, 95, 101, and 103, Rotherfield-st., u.t. 5½ yrs., g.r. 9*l.*, y.r. 220*l.* | 300 |

By STIMSON & SONS.

| | |
|---|---|
| Battersea.—30, Chivalry-rd. and stabling, f., p. | 1,220 |
| Fulham.—68, Wardo-av. (s), u.t. 82¾ yrs., g.r. 8*l.*, y.r. 50*l.* | 650 |
| Tooting.—61, Vant-rd., f., w.r. 33*l.* 16s. | 275 |

By J. A. & W. THARP.

| | |
|---|---|
| Plumstead.—Melling-st., f.g. rents 21*l.*, reversion in 86 yrs. | 420 |

By WHITE & Co.

| | |
|---|---|
| Dulwich.—239, Lordship-la., u.t. 67 yrs., g.r. 8*l.*, w.r. 39*l.* | £145 |

By GRIMLEY & SON.

| | |
|---|---|
| Moseley, Worcester.—Woodstock-rd., Woodlands, u.t. 62 yrs., g.r. 7*l.* 10s. | 245 |
| King's Norton, Worcester.—79 to 83, Macdonald-st.; 150 to 158 (even), Barford-st., f., w.r. 225*l.* | 1,700 |
| Small Heath, Worcester.—664, Coventry-rd., u.t. 68 yrs., g.r. 4*l.* 15s. | 245 |

March 8.—By A. G. BONSOR.

| | |
|---|---|
| Kingston, Surrey.—90, Eden-st., area 6,025 ft f. | 1,575 |

By HALL & NEWMAN.

| | |
|---|---|
| Hackney.—8 to 15, Montagu-ter., u.t. 65 yrs., g.r. 32*l.*, w.r. 136*l.* 10s. | 160 |

By WALTER WINDRUM.

| | |
|---|---|
| Hornsey.—37, 39, and 41, Clarendon-rd., f., y. and w.r. 88*l.* 6s. | 700 |
| Mile End.—7, 9, and 11, Berner-st., f., w.r. 156*l.* | 1,305 |
| 12 and 13, Coke-st., f., w.r. 91*l.* | 510 |
| Plaistow.—183 and 185, Balaam-st., f., w.r. 78*l.* | 625 |

*Contractions used in these lists.*—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

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# PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the average prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

## BRICKS, &c.

| Per 1000 Alongside, in River. | £ s. d. |
|---|---|
| Best Stocks | 1 14 0 |
| Picked Stocks for Facings | 2 7 0 |

Per 1000, Delivered at Railway Depôt.

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| Flettons | 1 12 0 | Best Blue Pressed Staffordshire | 3 15 0 |
| Best Fareham Red | 3 12 0 | Do. Bullnose | 4 0 0 |
| Best Red Pressed Ruabon Facing | 5 0 0 | Best Stourbridge Fire Bricks | 4 0 0 |

GLAZED BRICKS—

| | | | |
|---|---|---|---|
| Best White, Ivory, and Salt Glzd.Str'tch'rs | 11 7 6 | Double Headers | 13 17 6 |
| | | One Side and two Ends | 17 17 6 |
| Headers | 10 17 6 | Two Sides and one End | 18 17 6 |
| Quoins, Bullnose, and 4½ in. Flats | 14 17 6 | Splays & Squints | 16 7 6 |
| D'ble Stretchers | 16 17 6 | | |

Second Quality £1 10s. per 1000 less than best.

| | s. d. | |
|---|---|---|
| Thames and Pit Sand | 6 9 | per yard, delivered. |
| Thames Ballast | 5 6 | » » |
| Best Portland Cement | 31 0 | per ton, » |
| Best Ground Blue Lias Lime | 19 0 | » » |

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

## STONE.

Per Ft. Cube.

| | s. d. |
|---|---|
| BATH STONE—delivered on road waggons, Paddington Depôt | 1 6½ |
| Do. do. delivered on road waggons, Nine Elms Depôt | 1 8½ |

PORTLAND STONE (20 ft. average)—

| | |
|---|---|
| Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf | 2 3 |
| White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf | 2 4½ |

Per Ft. Cube, delivered at Railway Depôt.

| | s. d. | | s. d. |
|---|---|---|---|
| Ancaster in blocks | 1 10 | Closeburn Red Freestone | 2 0 |
| Beer in blocks | 1 6 | Red Mansfield Freestone | 2 4 |
| Greenshill in blocks | 1 10 | Talacre & Gwespyr Stone | 2 4 |
| Darley Dale in blocks | 2 4 | | |
| Red Corsehill in blocks | 2 3 | | |

YORK STONE—*Robin Hood Quality.*

| Per Ft. Cube, Delivered at Railway Depôt. | s. d. |
|---|---|
| Scappled random blocks | 2 10 |

Per Ft. Super., Delivered at Railway Depôt.

| | |
|---|---|
| 6 in. sawn two sides landings to sizes (under 40 t. super.) | 2 3 |
| 6 in. rubbed two sides ditto, ditto | 2 6 |
| 3 in. sawn two sides slabs (random sizes) | 0 11½ |
| 2 in. to 2½ in. sawn one side slabs (random sizes) | 0 7 |
| 1½ in. to 2 in. ditto, ditto | 0 6 |

HARD YORK—

| Per Ft. Cube, Delivered at Railway Depôt. | |
|---|---|
| Scappled random blocks | 3 0 |

Per Ft. Super., Delivered at Railway Depôt.

| | |
|---|---|
| 6 in. sawn two sides landing to sizes (under 40 ft. super.) | 2 8 |
| 6 in. rubbed two sides ditto | 3 0 |
| 3 in. sawn two sides slabs (random sizes) | 1 2 |
| 2 in. self-faced random flags | 0 5 |

## SLATES.

Per 1000 of 1200 at Railway Depôt.

| In. In. | £ s. d. | In. In. | £ s. d. |
|---|---|---|---|
| 20×10 best blue Bangor | 13 2 6 | 20×10 best Eur'ka unfading green | 15 17 6 |
| 20×12 ditto | 13 17 6 | 20×12 ditto | 18 7 6 |
| 20×10 1st quality ditto | 13 0 0 | 18×10 ditto | 13 5 0 |
| 20×12 ditto | 13 15 0 | 16×8 ditto | 10 5 0 |
| 16×8 ditto | 7 5 0 | 20×10 permanent green | 11 12 6 |
| 22×10 best blue Portmadoc | 12 12 6 | 18×10 ditto | 9 12 6 |
| 16×8 ditto | 6 12 6 | 16×8 ditto | 6 12 6 |

## TILES.

At Railway Depôt.

| | s. d. | | s. d. |
|---|---|---|---|
| Best plain red roofing (per 1000) | 42 0 | Best "Hartshill" brand, plain sandfaced (per 1000) | 50 0 |
| Hip and Valley (per doz.) | 3 7 | Do. pressed (per 1000) | 47 6 |
| Best Broseley (per 1000) | 50 0 | Do. Ornamental (per 1000) | 50 0 |
| Do. Ornamental (per 1000) | 52 6 | Hip (per doz.) | 4 0 |
| Hip and Valley (per doz.) | 4 0 | Valley (per doz.) | 3 6 |
| Best Ruabon red, brown, or brindled (Edw'ds) (per 1000) | 57 6 | Staffords. (Hanley) Reds or Brindled (per 1000) | 42 6 |
| Do. Ornamental (per 1000) | 60 0 | Hand-made sandfaced (per 1000) | 45 0 |
| Hip (per doz.) | 4 0 | Hip (per doz.) | 4 0 |
| Valley (per doz.) | 3 0 | Valley (per doz.) | 3 6 |

## WOOD.

| BUILDING WOOD. | At per standard. £ s. d. | £ s. d. |
|---|---|---|
| Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in. | 14 0 0 ... | 15 10 0 |
| Deals: best 3 by 9 | 13 10 0 ... | 14 10 0 |

## WOOD (*Continued*).

| BUILDING WOOD (*Continued*)— | At per standard. £ s. d. | £ s. d. |
|---|---|---|
| Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in. | 11 10 0 ... | 12 10 0 |
| Battens: best 2½ by 6 and 3 by 6 | 0 10 0 | less than 7 in. and 8 in. |
| Deals: seconds | 1 0 0 | less thn best. |
| Battens: seconds | 0 10 0 » | » |
| 2 in. by in. and 2 in. by 6 in. | 9 10 0 ... | 10 10 0 |
| 2 in. by 4½ in. and 2 in. by 5 in. | 9 0 0 ... | 10 0 0 |
| Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in. | 0 10 0 | more than battens. |
| ¼ in. | 1 0 0 | » |
| Fir timber: best middling Danzig or Memel (average specification) | At per load of 50 ft. 5 0 0 ... | 5 10 0 |
| Seconds | 4 10 0 ... | 5 0 0 |
| Small timber (8 in. to 10 in.) | 3 17 6 ... | 4 0 0 |
| Small timber (6 in. to 8 in.) | 3 5 0 ... | 3 10 0 |
| Swedish balks | 2 12 6 ... | 3 0 0 |
| Pitch-pine timber (30 ft. average) | 5 5 0 ... | 6 0 0 |

| JOINERS' WOOD. | At per standard. £ s. d. | £ s. d. |
|---|---|---|
| White Sea: first yellow deals, 3 in. by 11 in. | 24 10 0 ... | 25 10 0 |
| 3 in. by 9 in. | 22 10 0 ... | 23 10 0 |
| Battens, 2½ in. and 3 in. by 7 in. | 17 0 0 ... | 18 0 0 |
| Second yellow deals, 3in. by 11in. | 19 0 0 ... | 20 0 0 |
| » » 3 in. by 9 in. | 18 0 0 ... | 19 10 0 |
| Battens, 2½ in. and 3in. by 7 in. | 14 0 0 ... | 15 0 0 |
| Third yellow deals, 3 in. by 11 in. and 9 in. | 14 0 0 ... | 15 0 0 |
| Battens, 2½ in. and 3 in. by 7 in. | 11 10 0 ... | 12 10 0 |
| Petersburg: first yellow deals, 3 in. by 11 in. | 21 10 0 ... | 22 10 0 |
| Do. 3 in. by 9 in. | 18 10 0 ... | 19 10 0 |
| Battens | 14 0 0 ... | 15 0 0 |
| Second yellow deals, 3 in. by 11 in | 16 10 0 ... | 17 10 0 |
| Do. 3 in. by 9 in. | 15 0 0 ... | 16 0 0 |
| Battens | 11 10 0 ... | 12 10 0 |
| Third yellow deals, 3in. by 11 in. | 13 10 0 ... | 14 10 0 |
| Do. 3 in. by 9 in. | 13 0 0 ... | 14 0 0 |
| Battens | 10 10 0 ... | 11 0 0 |
| White Sea and Petersburg— First white deals, 3 in. by 11 in. | 15 0 0 ... | 16 0 0 |
| » » 3 in. by 9 in. | 14 0 0 ... | 14 10 0 |
| Battens | 11 10 0 ... | 12 10 0 |
| Second white deals, 3in. by 11in. | 14 0 0 ... | 15 0 0 |
| » » 3 in. by 9 in. | 13 0 0 ... | 14 0 0 |
| Battens | 10 10 0 ... | 11 0 0 |
| Pitch-pine: deals | 19 0 0 ... | 21 0 0 |
| Under 2 in. thick extra | 0 10 0 ... | 1 0 0 |
| Yellow Pine—First, regular sizes | 48 0 0 | upwards. |
| Oddments | 32 0 0 | » |
| Seconds, regular sizes | 33 0 0 | » |
| Oddments | 28 0 0 | » |
| Kurai Pine—Planks per ft. cube. | 0 4 6 ... | 0 6 0 |
| Danzig and Stettin Oak Logs— Large, per ft. cube | 0 3 0 ... | 0 3 9 |
| Small » » | 0 2 6 ... | 0 2 6 |
| Wainscot Oak Logs, per ft. cube | 0 6 6 ... | 0 8 0 |
| Dry Wainscot Oak, per ft. sup. as inch | 0 0 10 ... | 0 1 0 |
| ¼ in. do. do. | 0 0 8½ ... | — |
| Dry Mahogany—Houndras, Tabasco, per ft. super. as inch | 0 0 10 ... | 0 1 1 |
| Selected, Figury, per ft. super. as inch | 0 1 6 ... | 0 2 6 |
| Dry Walnut, American, per ft. super. as inch | 0 0 10 ... | 0 1 0 |
| Teak, per load | 18 0 0 ... | 22 0 0 |
| American Whitewood planks, per ft. cube | 0 5 0 ... | 0 6 0 |
| Prepared Flooring, etc.— | Per square. | |
| 1 in. by 7 in. yellow, planed and shot | 0 13 6 ... | 0 17 0 |
| 1 in. by 7 in. yellow, planed and matched | 0 14 0 ... | 0 18 0 |
| 1¼ in. by 7 in. yellow, planed and matched | 0 16 0 ... | 1 0 0 |
| 1 in. by 7 in. white, planed and shot | 0 12 0 ... | 0 14 6 |
| 1 in. by 7 in. white, planed and matched | 0 12 6 ... | 0 15 0 |
| 1¼ in. by 7 in. white, planed and matched | 0 15 0 ... | 0 16 6 |
| ⅝ in. by 7 in. yellow, matched and beaded or V-jointed brds. | 0 11 0 ... | 0 13 6 |
| 1 in. by 7 in. » » | 0 14 0 ... | 0 18 6 |
| ⅝ in. by 7 in. white » » | 0 10 0 ... | 0 11 0 |
| 1 in. by 7 in. » » | 0 12 9 ... | 0 15 0 |

6 in. at 6d. to 9d. per square less than 7 in.

## JOISTS, GIRDERS, &c.

| | In London, or delivered Railway Vans, per ton. £ s. d. | £ s. d. |
|---|---|---|
| Rolled Steel Joists, ordinary sections | 7 10 0 ... | 8 0 0 |
| Compound Girders, ordinary sections | 9 10 0 ... | 10 0 0 |
| Steel Compound Stanchions | 11 0 0 ... | 12 0 0 |
| Angles, Tees, and Channels, ordinary sections | 9 10 0 ... | 10 0 0 |
| Flitch Plates | 9 10 0 ... | 10 0 |
| Cast Iron Columns & Stanchions, including ordinary patterns | 7 10 0 ... | 8 10 0 |

## METALS.

| IRON— | Per ton, in London. £ s. d. | £ s. d. |
|---|---|---|
| Common Bars | 9 0 0 ... | 9 10 0 |
| Staffordshire Crown Bars, good merchant quality | 9 5 0 ... | 9 15 0 |
| Staffordshire "Marked Bars" | 11 0 0 ... | — |
| Mild Steel Bars | 9 5 0 ... | 9 15 0 |
| Hoop Iron, basis price | 10 0 0 ... | — |
| » » Galvanised | 17 10 0 ... | — |
| (*And upwards, according to size and gauge.) | | |
| Sheet Iron Black— Ordinary sizes to 20 g. | 10 5 0 ... | — |
| » » 24 g. | 11 5 0 ... | — |
| » » 26 g. | 12 15 0 ... | — |
| Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g. | 15 10 0 ... | — |
| Ordinary sizes to 22 g. and 24 g. | 16 0 0 ... | — |
| » » 26 g. | 17 0 0 ... | — |
| Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g. | 18 10 0 ... | — |
| » » 22 g. and 24 g. | 19 0 0 ... | — |
| » » 26 g. | 20 10 0 ... | — |

## METALS (*Continued*).

| IRON (*Continued*)— | Per ton, in London. £ s. d. | £ s. d. |
|---|---|---|
| Galvanised Corrugated Sheets— Ordinary sizes, 6ft. to 8ft. 20 g. | 15 0 0 ... | — |
| » » 22 g. and 24 g. | 15 5 0 ... | — |
| » » 26 g. | 16 15 0 ... | — |
| Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker | 12 10 0 ... | — |
| Best Soft Steel Sheets, 2 g. & 24 g. | 13 10 0 ... | — |
| » » » 26 g. | 15 10 0 ... | — |
| Cut Nails, 3 in. to 6 in. (Under 3 in., usual trade extras.) | 11 0 0 ... | 11 10 0 |

## LEAD, &c.

| | £ s. d. | |
|---|---|---|
| LEAD—Sheet, English, 4lb. and up | 19 15 0 ... | — |
| Pipe in coils | 20 5 0 ... | — |
| Soil pipe | 23 5 0 ... | — |
| Compo pipe | 23 5 0 ... | — |
| ZINC—Sheet— | In casks of 10 cwt. | |
| Vielle Montagne | 33 10 0 ... | — |
| Silesian | 33 5 0 ... | — |
| Zinc, in bundles, 1s. per cwt. extra. | | |
| COPPER— Strong Sheet per lb. | 0 1 0 ... | — |
| Thin » » | 0 1 1 ... | — |
| Copper nails » | 0 0 10 ... | — |
| Copper wire » | 0 0 10 ... | — |
| BRASS— Strong Sheet » | 0 0 11 ... | — |
| Thin » | 0 1 0 ... | — |
| TIN—English Ingots » | 0 1 11 ... | — |
| SOLDER—Plumbers' » | 0 0 8½ ... | — |
| Tinmen's » | 0 0 11 ... | — |
| Blowpipe » | 0 1 2 ... | — |

## ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

| | | | |
|---|---|---|---|
| 15 oz. thirds | 2¼d. | 26 oz. fourths | 3¼d. |
| » fourths | 1¼d. | 32 oz. thirds | 5d. |
| 21 oz. thirds | 3d. | » fourths | 4¼d. |
| » fourths | 2¾d. | Fluted Sheet, 15 oz. | 3¼d. |
| 26 oz. thirds | 4d. | » 21 oz. | 4¼d. |

## ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

| | | | |
|---|---|---|---|
| ⅛ Hartley's | 2d. | Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white | 3¼d. |
| 1/16 » | 2¼d. | | |
| ¼ » | 2¾d. | Ditto, tinted | 5d. |

* Not less than three crates.

## OILS, &c.

| | | £ s. d. |
|---|---|---|
| Raw Linseed Oil in pipes | per gallon | 0 3 2 |
| » » » in barrels | » | 0 3 3 |
| » » » in drums | » | 0 3 5 |
| Boiled » » in barrels | » | 0 3 5 |
| » » » in drums | » | 0 3 8 |
| Turpentine in barrels | » | 0 2 10 |
| » in drums | » | 0 3 0 |
| Genuine Ground English White Lead, per ton | | 26 10 0 |
| Red Lead, Dry | » | 23 5 0 |
| Best Linseed Oil Putty | per cwt. | 0 10 0 |
| Stockholm Tar | per barrel | 1 12 0 |

## VARNISHES, &c.

| | Per gallon. £ s. d. |
|---|---|
| Fine Pale Oak Varnish | 0 8 0 |
| Pale Copal Oak | 0 10 6 |
| Superfine Pale Elastic Oak | 0 12 6 |
| Fine Extra Hard Church Oak | 0 10 0 |
| Superfine Hard-drying Oak, for seats of Churches | 0 14 6 |
| Fine Elastic Carriage | 0 12 0 |
| Superfine Pale Elastic Carriage | 0 16 0 |
| Fine Pale Maple | 0 10 0 |
| Finest Pale Durable Copal | 0 18 0 |
| Extra Pale French Oil | 1 1 0 |
| Eggshell Flating Varnish | 0 18 0 |
| White Pale Enamel | 1 4 0 |
| Extra Pale Paper | 0 12 0 |
| Best Japan Gold Size | 0 10 6 |
| Best Black Japan | 0 16 0 |
| Oak and Mahogany Stain | 0 9 0 |
| Brunswick Black | 0 8 0 |
| Berlin Black | 0 16 0 |
| Knotting | 0 10 9 |
| French and Brush Polish | 0 10 6 |

## TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

## TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 6 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BLACKWOOD.—For erection of a new mission hall, for the rector and churchwardens of St. Margaret's Church, Blackwood. Mr. A. F. Webb, M.S.A., architect and surveyor, Blackwood:—

| | | | |
|---|---|---|---|
| J. Newcombe & Son | £2,355 | Passmore & Perkins, Pontllanfraith* | £2,150 |
| W. Watkins | 2,299 | T. Matthews | 2,126 |
| Leadbeter & Co. | 2,245 | | |
| E. J. Davies & Co. | 2,170 | | |

BURNLEY.—For construction of a concrete river wall at Altham Sewage Works, for Burnley Corporation. Mr. G. H. Pickles, M.Inst.C.E., Borough Engineer and Surveyor, Burnley. Quantities by Engineer:—

M. & J. W. Heap, Clifton-street, Burnley* ..... £567 10

CHEPSTOW.—For erection of a police-station. Mr. W. Tanner, F.S.I., County Surveyor, Chepstow:—

| | | | |
|---|---|---|---|
| D. Bendall & Son | £2,500 | G. F. Leadbeter | £2,196 |
| J. Perkins & Son, Ltd. | 2,485 | J. Jenkins, Ltd. | 2,150 |
| G. Edwards | 2,448 | C. H. Reed | 2,126 |
| J. W. Griffiths | 2,375 | H. J. Herbert | 2,100 |
| J. H. Williams | 2,287 | Poulton & Whiting | 2,050 |
| R. W. Moon | 2,277 | Kirby & Westacott, Newport* | 2,029 |
| E. F. King & Co. | 2,250 | | |

LONDON.—For cleaning and painting the Highbury Industrial School, Islington, for the London County Council:—

| | | | |
|---|---|---|---|
| J. Grover & Son | £1,100 | W. Silk & Son | £939 |
| McCormick & Sons, Ltd. | 1,029 | E. Lawrance & Sons, Ltd. | 949 |
| A. E. Symes | 1,015 | Vigor & Co. | 810 |

[The Architect's estimate, comparable with the tenders, is £845.]

LONDON.—For construction of sanitary conveniences in Blackshaw-road, Tooting, and on Clapham-common, for Wandsworth Borough Council:—

*Erection of Sanitary Convenience for Women in High-street, Putney, adjoining London and South-Western Railway.*

W. Johnson & Co., Ltd. ..... £696

*Construction of Underground Sanitary Conveniences in Blackshaw-road, near its junction with Tooting High-street.*

Dowsett & Jenkins ..... £1,096

*Erection of Sanitary Convenience for Women on Clapham-common, near Clapham Cross.*

Dowsett & Jenkins ..... £575

PUDSEY.—For erection of a pair of semi-detached houses in New-street. Messrs. Nelson & Birkinshaw, architects, Leeds:—

G. Verity & Son, Lowtown, Pudsey* ..... £778

[Fifty-six tenders in all received.]

ROSS.—For reconstruction of Free Library premises into Public Offices and Reading Rooms, for Ross Urban District Council. Messrs. Small & Ashton, architects, Ross:—

| | | | |
|---|---|---|---|
| Peake | £686 | Kemp & Sons, Ross* | £587 |
| Lewis | 608 | Clark ‡ | 563 |

‡ Withdrawn.

SKEFFORD.—For new Wesleyan Church. Messrs. George Baines & Son, architects, 5, Clement's Inn, Strand, London, W.C.:—

| — | Estimate A. | Saving. B. | C. | D. | E. | F. |
|---|---|---|---|---|---|---|
| | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. |
| C. Wright‡ | 2,080 0 0 | 15 0 0 | 30 0 0 | 12 0 0 | 21 0 0 | 9 0 0 |
| Henson & Son | 2,116 10 8 | 10 10 0 | 28 0 0 | 25 19 8 | 28 0 0 | 15 16 6 |
| Redhouse & Son | 2,159 0 0 | 16 0 0 | 26 10 0 | 75 0 0 | 30 0 0 | 13 0 0 |
| Corby & Son | 2,219 0 0 | 16 0 0 | 40 0 0 | 20 0 0 | 30 0 0 | 11 15 0 |
| Willmott & Sons | 2,220 0 0 | 13 0 0 | 30 0 0 | 85 0 0 | 35 0 0 | 15 0 0 |
| C. Souster | 2,278 0 0 | 19 10 0 | 35 0 0 | 30 9 2 | 34 0 0 | 14 6 0 |
| Battley, Sons, & Holness | 2,235 0 0 | 11 10 0 | 36 0 0 | 96 0 0 | 43 0 0 | 19 10 0 |
| S. Foster | 2,380 0 0 | 12 0 0 | 28 0 0 | 20 0 0 | 30 0 0 | 18 0 0 |
| Lewin & Son | 2,496 0 0 | 10 0 0 | 31 0 0 | 23 0 0 | 32 0 0 | 33 0 0 |

‡ Accepted with modifications.

LIVERPOOL.—For erection of an operating department at the workhouse, Brownlow-hill. Messrs. Haigh & Thompson, architects, 2, Exchange-street East, Liverpool:—

A. W. Pople & Co., Shaw-street, Liverpool* £1,140

LONDON.—For the enlargement of the Riley-street School for Mentally Defective Children, Bermondsey, for the London County Council:—

| | |
|---|---|
| F. Smith & Co. | £2,088 12 3 |
| W. Smith & Son | 2,016 0 0 |
| Rice & Son | 2,015 0 0 |
| H. Groves | 1,897 0 0 |
| Galbraith Bros., Ltd. | 1,889 5 6 |
| G. Parker & Sons | 1,860 0 0 |
| T. D. Leng | 1,795 0 0 |
| J. Marsland & Sons | 1,788 0 0 |
| J. Appleby & Sons | 1,756 0 0 |
| W. King & Son | 1,745 0 0 |
| E. A. Roome & Co. | 1,715 0 0 |

[The Architect's estimate, comparable with the tenders, is £1,728.]

LONDON.—Rebuilding of Vauxhall-street School, Kennington, and erection of a domestic economy centre, for the London County Council:—

| | | | |
|---|---|---|---|
| J. Appleby & Sons | £29,334 | C. Wall, Ltd. | £24,166 |
| J. Marsland & Son | 25,541 | G. Godson & Sons | 23,457 |
| W. King & Son | 25,390 | Rowley Bros. | 23,457 |
| W. Downs | 25,390 | J. & C. Bowyer, Ltd. | 22,759 |
| W. Johnson & Co., Ltd. | 24,350 | | |

[The Architect's estimate, comparable with the tenders, is £23,500.]

SOUTHAMPTON.—For alterations and extensions to No. 128, Above Bar, Southampton, for Colonel Bance. Mr. Wm. Burrough Hill, F.S.I., architect and surveyor, Southampton:—

| | | | |
|---|---|---|---|
| H. Stevens & Co. | No. 1 Estimate | £143 0 | £479 |
| | No. 2 ,, | 226 0 | |
| | No. 3 ,, | 110 0 | |
| A. Wright & Son | | | £469 |
| F. Kimber | No. 1 Estimate | £115 10* | £449 |
| | No. 2 ,, | 213 10* | |
| | No. 3 ,, | 120 0 | |

**Ham Hill Stone.**
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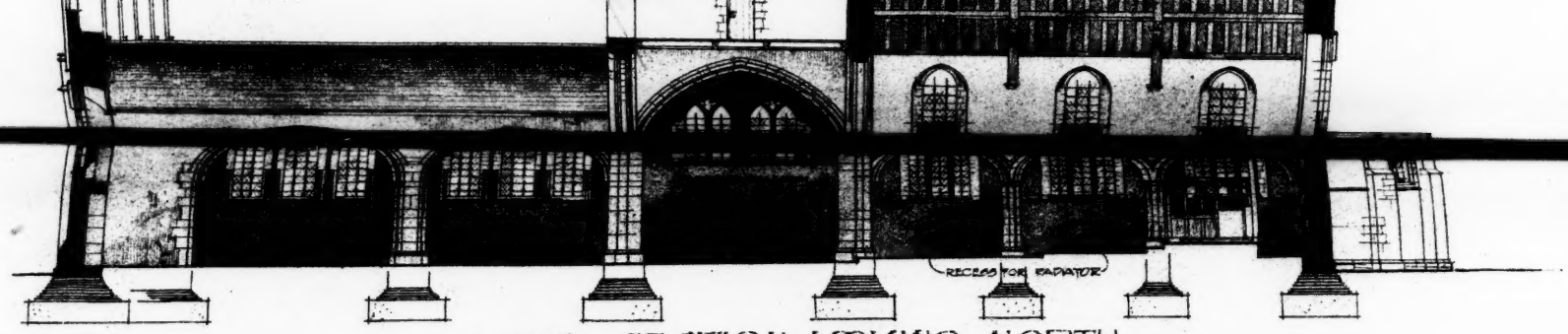


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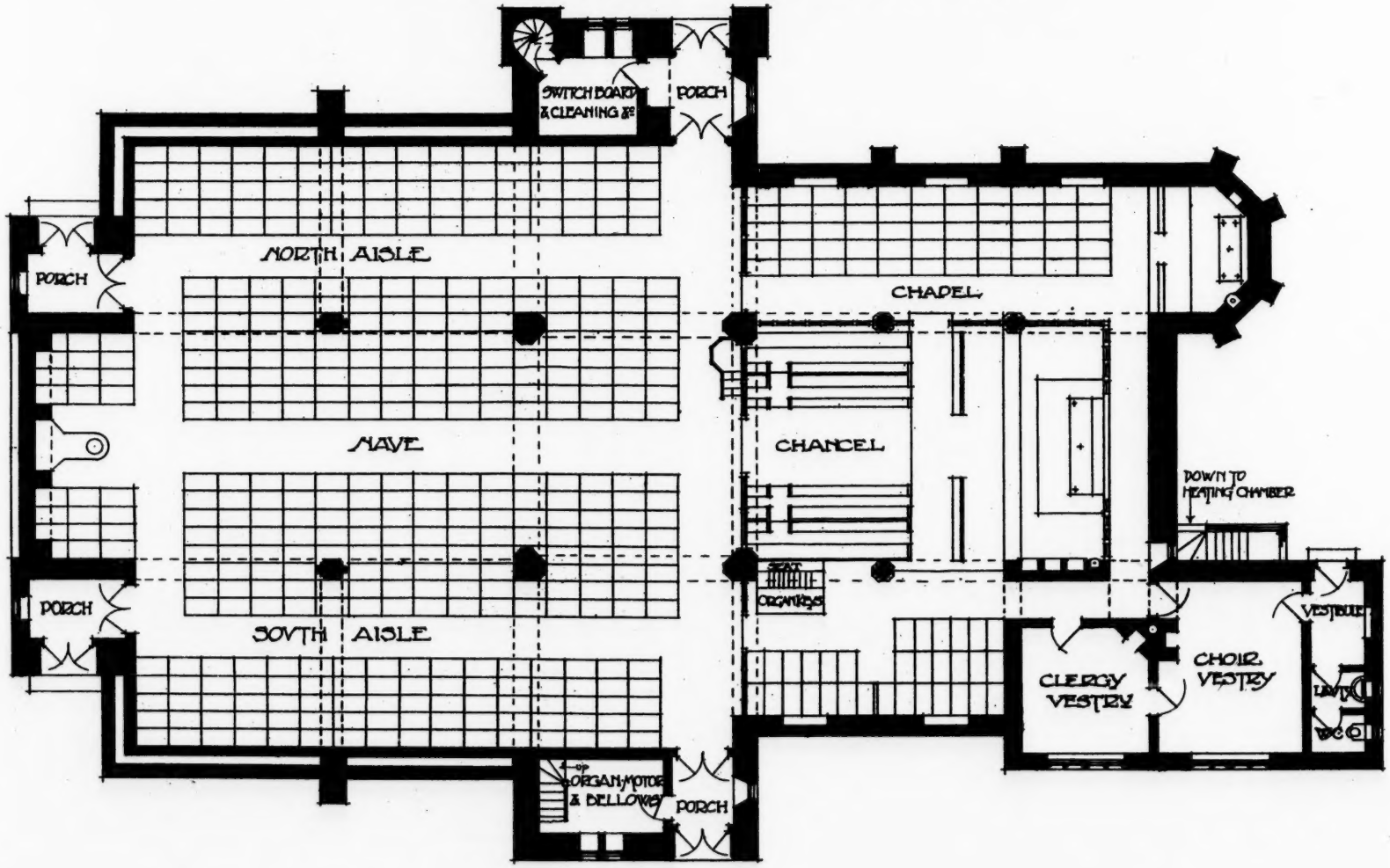


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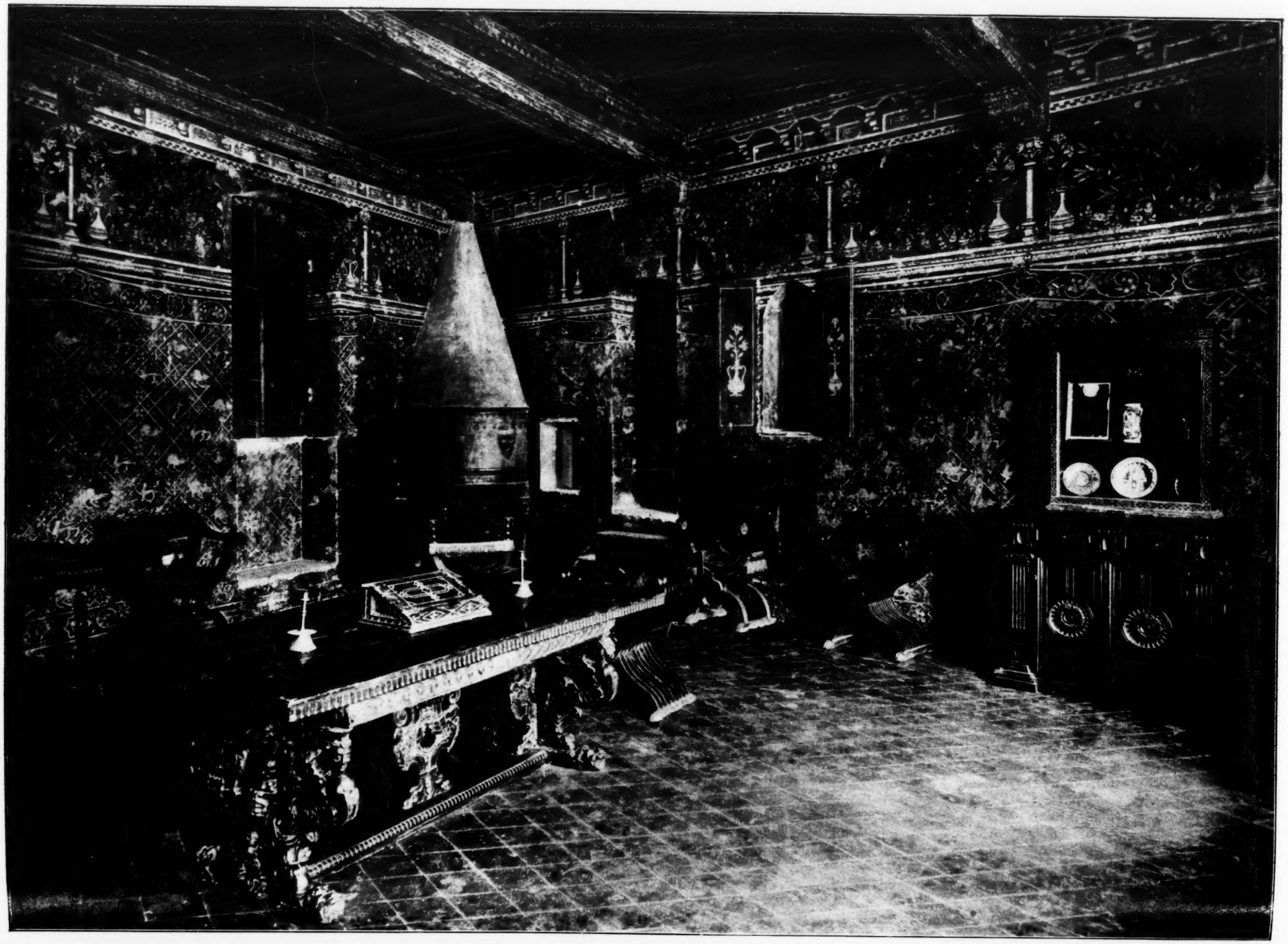

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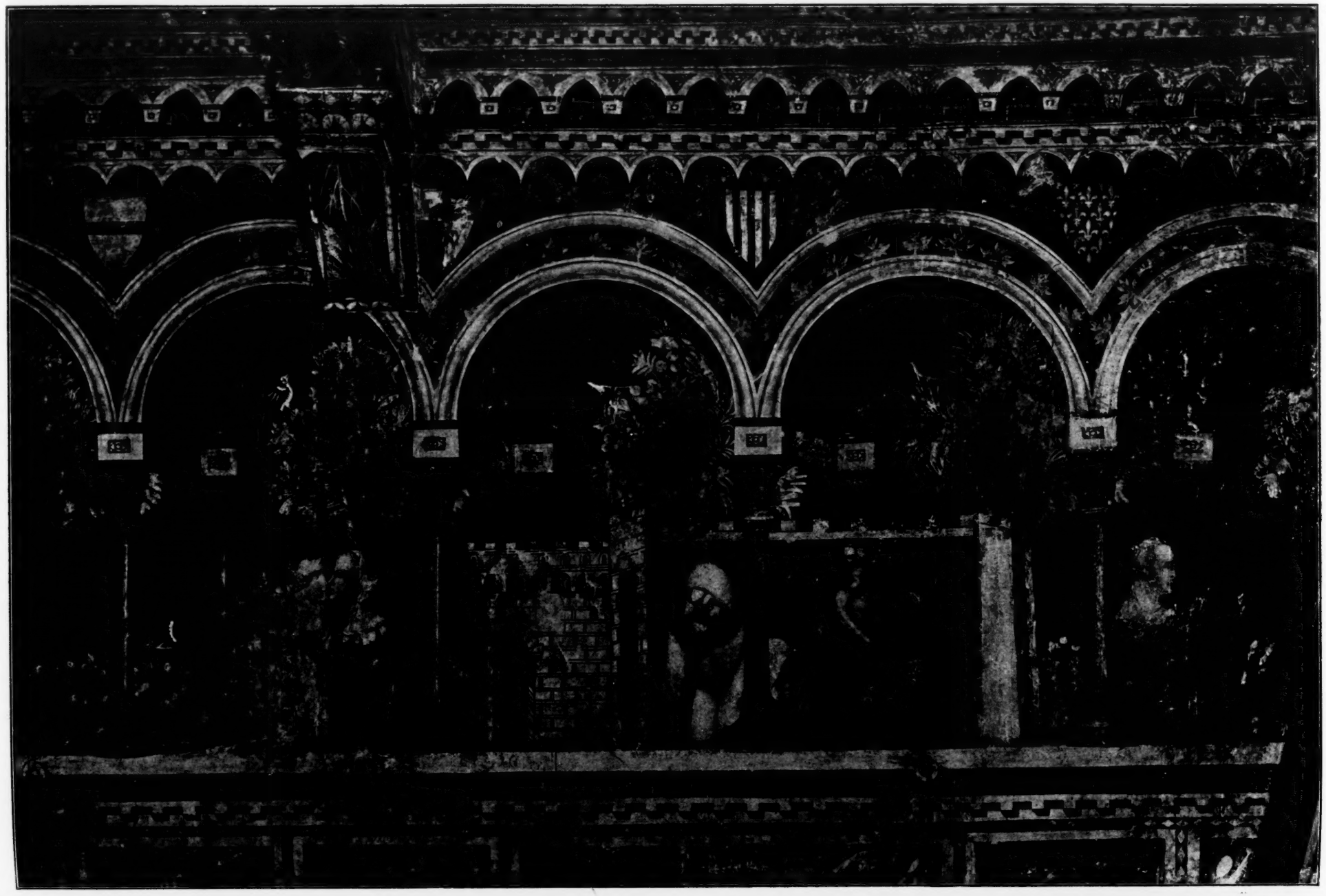

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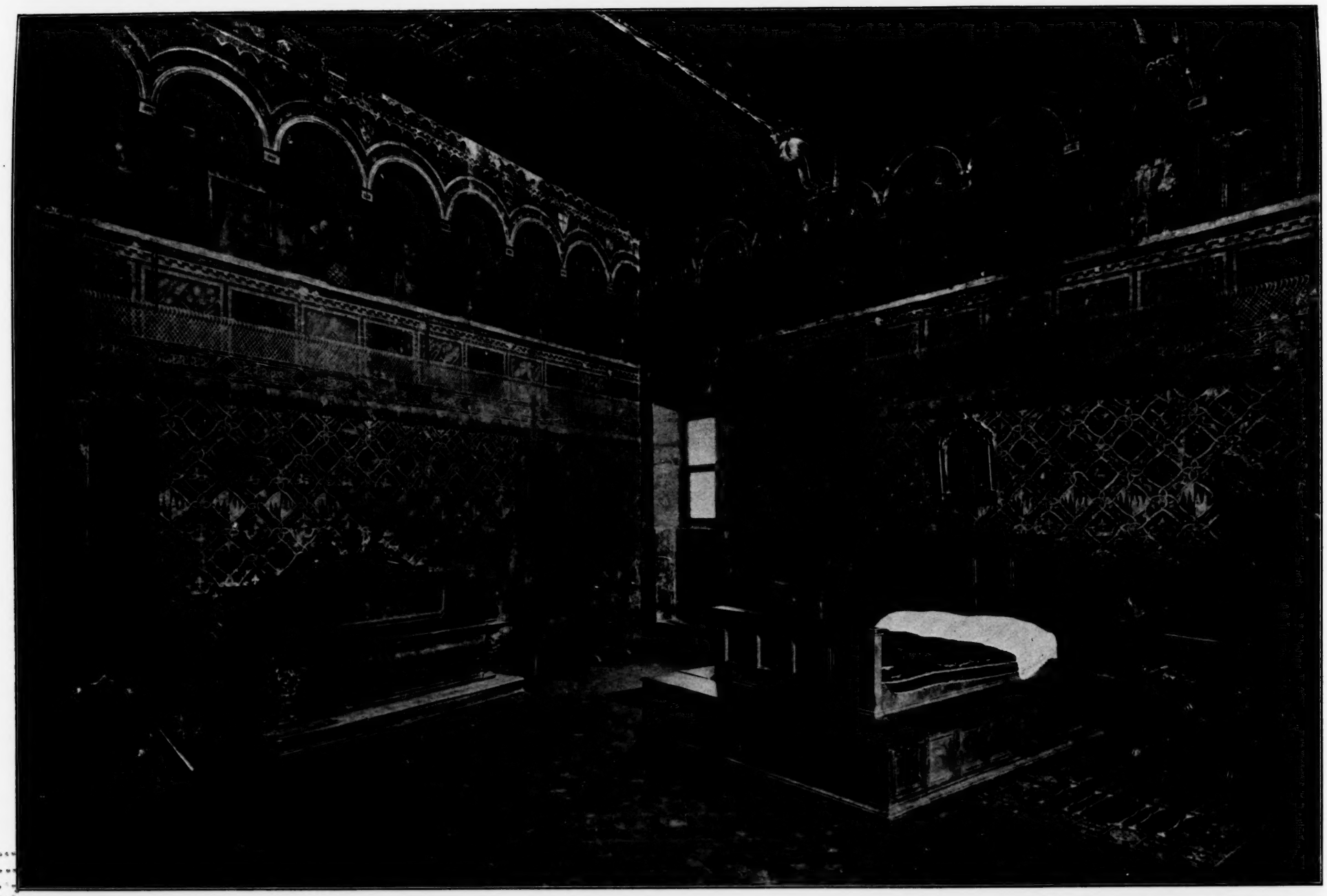

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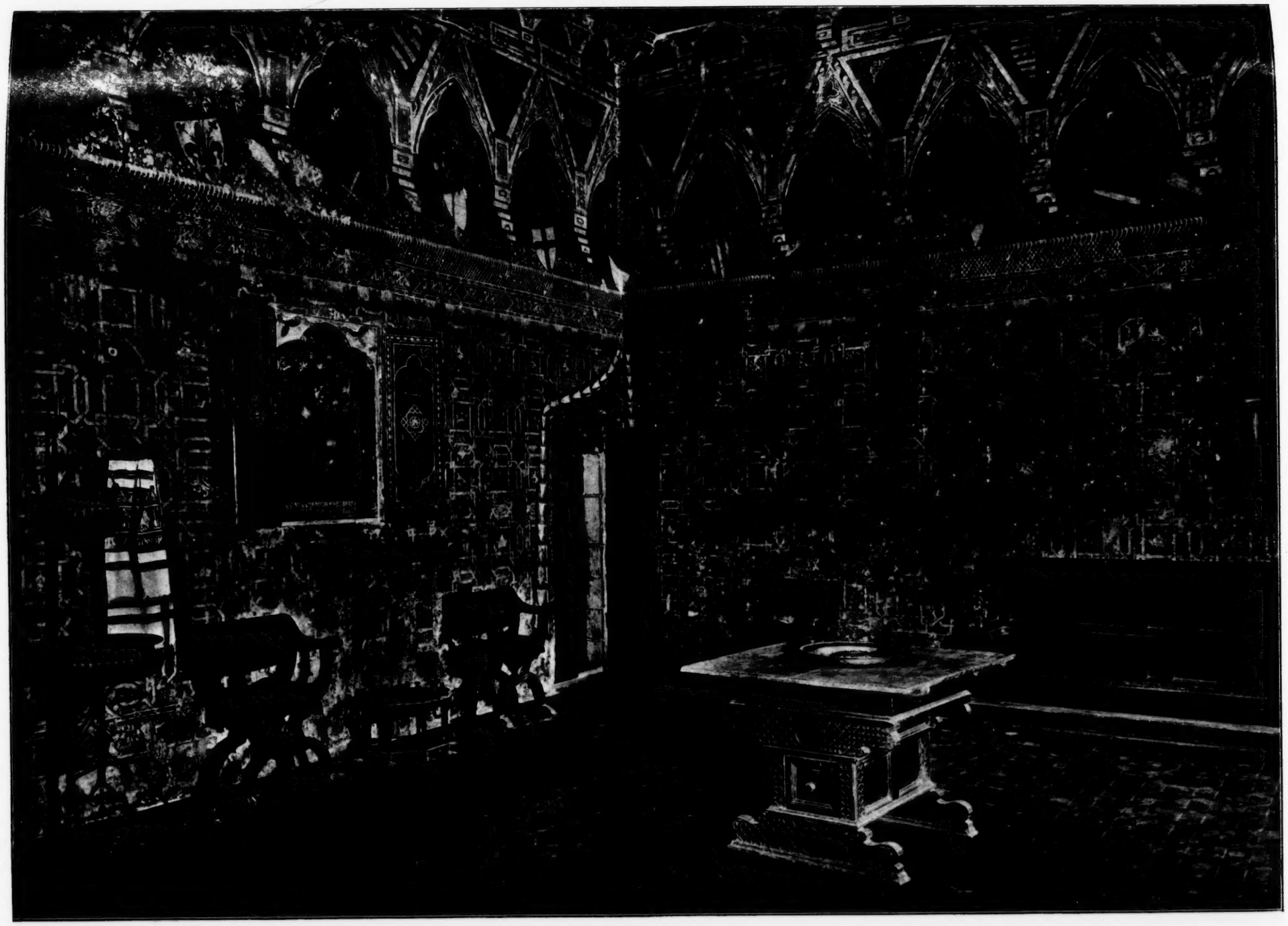

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